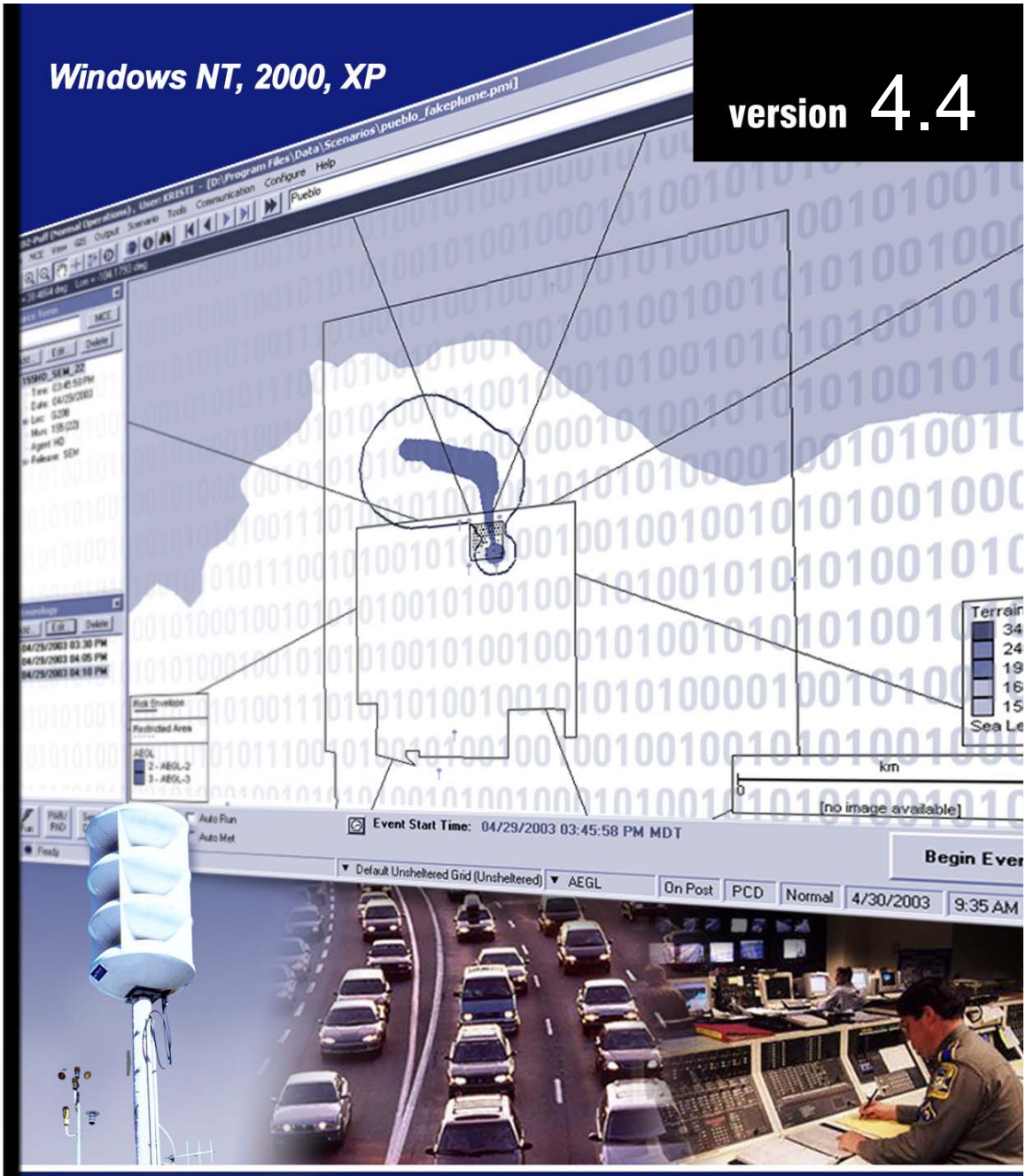
D2-Puff™

Dispersion Modeling Software

Windows NT, 2000, XP

version 4.4



Fast Track Blue Grass

Innovative Emergency Management®

TRADEMARKS

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About the *D2-Puff Fast Track Tutorial*

What is D2-Puff?

D2-Puff™ is a dispersion-modeling tool that is used to estimate downwind hazard distances from releases of chemical agents. As a computer model, it allows users to enter information about the stored chemical agent and meteorological conditions at a Chemical Stockpile Emergency Preparedness Program (CSEPP) site or a user-defined site. When a scenario is run, D2-Puff calculates dosages or AEGLs. Users may then analyze dosage amounts (or AEGLs) and times and atmospheric concentrations displayed in maps and tables.

D2-Puff can be used to model complex events that involve releases at multiple locations and times. It is also capable of using meteorological observations involving multiple locations and times and forecast data. D2-Puff works with another program called MetIngestor to provide this kind of met data.

Purpose of the D2-Puff Fast Track Tutorial

The *D2-Puff Fast Track Tutorial* is designed to teach you the basics of using D2-Puff for hazard analysis tasks. You will learn how to start the D2-Puff model and how to load MCEs and/or create new scenarios for hazard analysis purposes. You will also learn how to declare and respond to an event, how to set the D2-Alarm features, and how to add special facilities to be included in the Run Report. Finally, you will learn how to view output data by creating the Run Report, which compiles your model run output into one document, allowing you to complete hazard analysis tasks easily and efficiently.

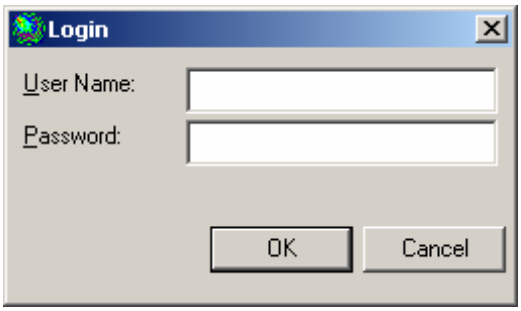
There are 12 individual lessons included in the Fast Track tutorial:

- Lesson 1: Opening D2-Puff
- Lesson 2: Selecting an MCE and Running the D2-Puff Model
- Lesson 3: Using D2-Puff Meteorology Functions
- Lesson 4: Declaring an Event
- Lesson 5: Responding to an Event
- Lesson 6: Using Auto Run
- Lesson 7: Using D2-Alarm
- Lesson 8: Using D2-Chart
- Lesson 9: Using D2-Puff Shelter Analysis
- Lesson 10: Using D2-Puff GIS Output
- Lesson 11: Using the D2-Puff Run Report
- Lesson 12: Using the D2-Puff Work Plan

Opening D2-Puff

Step 1: Open D2-Puff

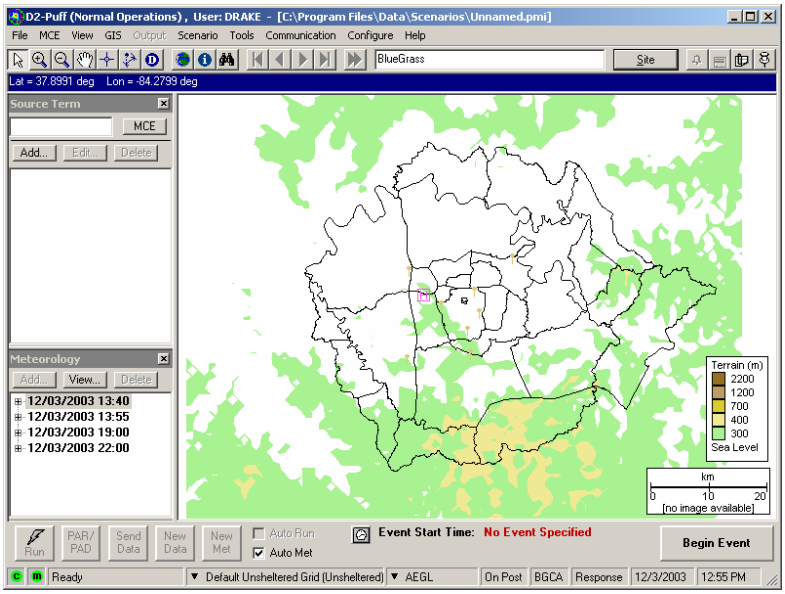
1. Double-click the **D2-Puff** icon on the Windows™ desktop, or select **Programs ⇒ D2-Puff ⇒ D2-Puff**. The **Login** dialog opens.



2. If you have not been assigned a user name and password, use the following:

   - User Name: **guest**
   - Password: **welcome**

   The D2-Puff main screen opens.

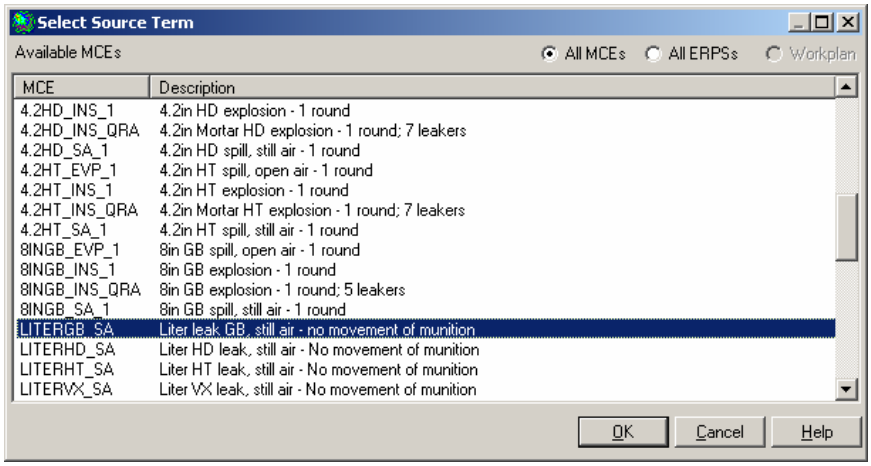


Selecting an MCE and Running the D2-Puff Model

The first lesson in this guide describes how to load a Maximum Credible Event (MCE[1]) and run the D2-Puff model. This is used to model a realistic scenario of a release of chemical agent.

Step 1: Select a Maximum Credible Event (MCE)

1. Click the **MCE** button at the top of the **Source Term** window. The **Select Source Term** dialog opens.



2. From the **Select Source Term** dialog, select the MCE **LITERGB_SA**. The description should read: **Liter leak GB, still air – no movement** of munition.
3. Click **OK**. The **Complete Release Information** dialog opens.

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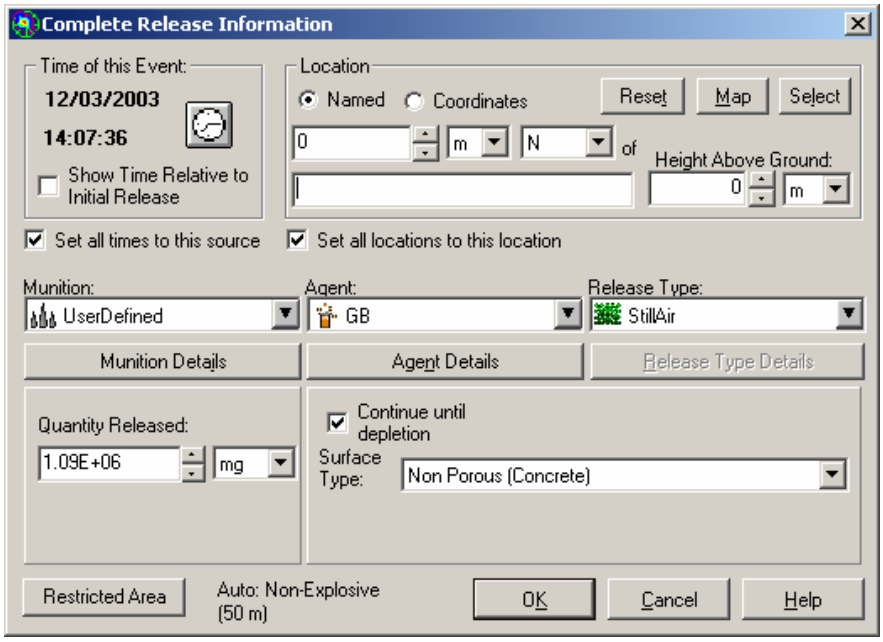
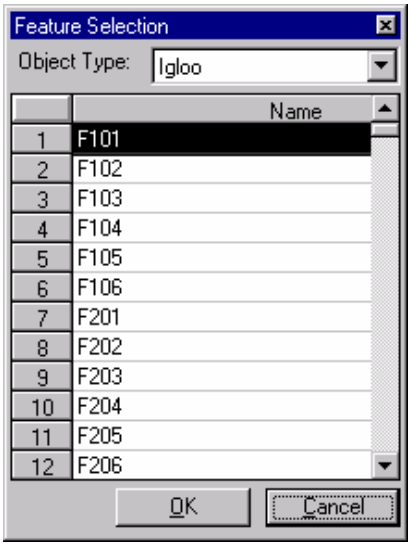
[1] **maximum credible event (MCE):** The worst single event that could occur at any time with maximal release of chemical agent from a munition, bulk container, or process as a result of an unintended, unplanned, or accidental occurrence. The event must be realistic with reasonable probability of occurrence. (**Source:** Department of the Army. *Chemical Accident or Incident Response and Assistance (CAIRA) Operations*. Department of the Army Pamphlet 50-6, 1991.)



Step 2: Select a Release Location

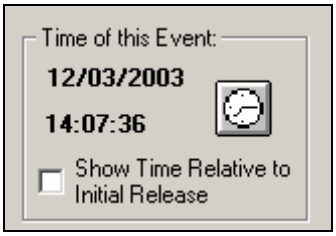
1. In the frame labeled **Location**, click the **Select** button. The **Feature Selection** dialog opens.



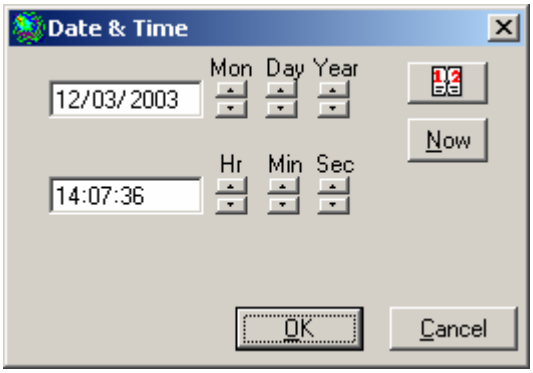
2. Each site has a pre-defined set of landmarks. Select an igloo from the list, then click **OK** to close the **Feature Selection** dialog.
3. Click **OK** to close the **Complete Release Information** dialog.

Step 3: Change the Time of Release

1. In the **Complete Release Information** dialog, click on the clock icon in the frame labeled **Time of this Event**.



2. The **Date & Time** dialog opens. Use the up and down arrows to move the time back 5 minutes. Click the **Now** button to capture the computer clock's current time.



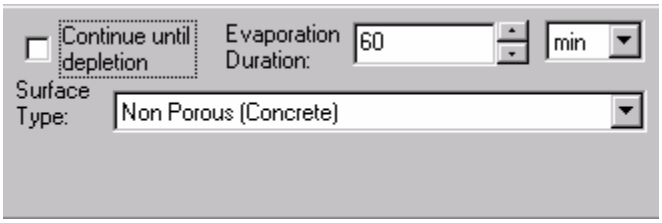
3. Click **OK** to close the **Date & Time** dialog.

NOTE: By default, "Set all times to this source" and "Set all locations to this location" are selected. This means that all subsequent releases in the scenario will use the same time and location as this release.

4. Click **OK** to close the **Complete Release Information** dialog.

Step 4: Change Source Values

1. In the **Complete Release Information** dialog, clear the "Continue until depletion" check box. The **Evaporation Duration** field appears.



2. Enter **60** in the **Evaporation Duration** field. Make certain **min** is the unit of measure selected from the drop-down list.

Step 5: Run the Scenario

1. Click **OK** to close the **Complete Release Information** dialog. The release record appears in the **Source Term** window.

2. To run the scenario, click the **Run** button at the bottom left of the D2-Puff main screen. D2-Puff displays the plume in predefined time steps and highlights met readings as they are used in the model time steps.

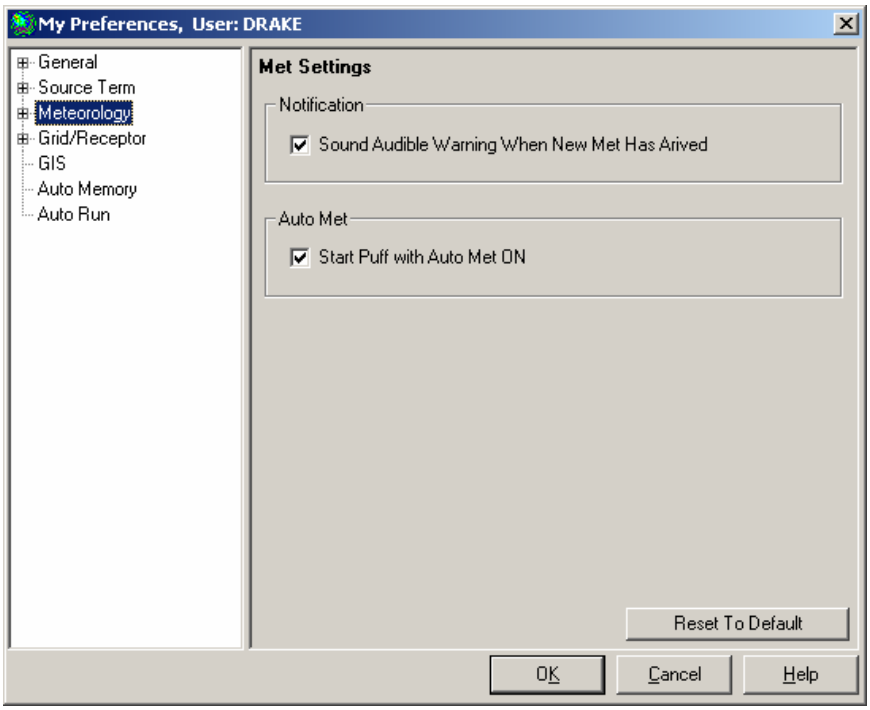
Using D2-Puff Meteorology Functions

When you open D2-Puff in normal operational mode, "Auto Met" is selected by default. Auto Met allows D2-Puff to automatically load met data as it becomes available, without intervention by the user.

Step 1: Set the Auto Met function

Set D2-Puff to open with "Auto Met" *not* selected:

1. From the D2-Puff **Tools** menu, select **My Preferences**. The **My Preferences** dialog opens.



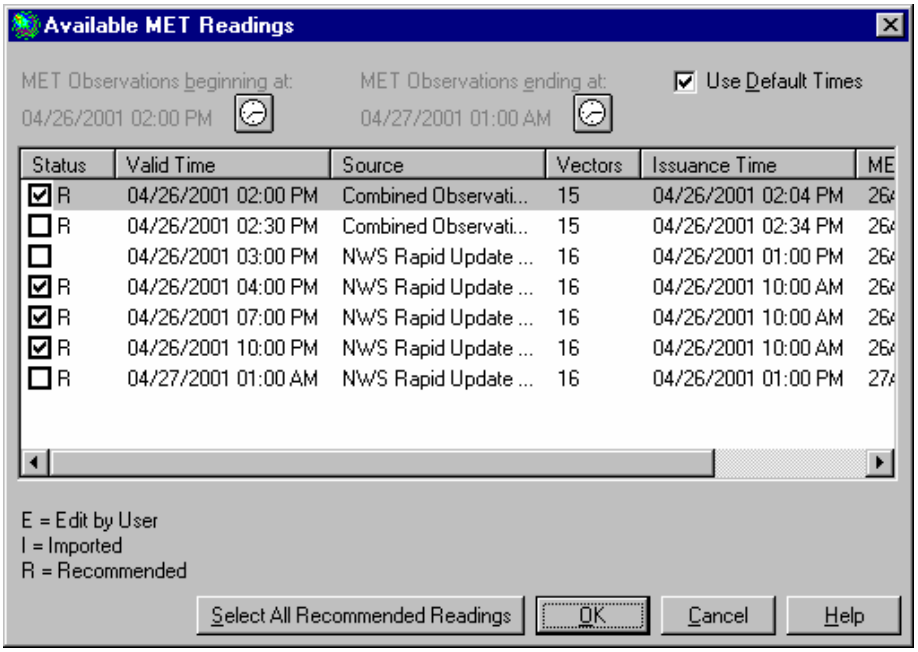
2. Click on the **Meteorology** option.
3. Clear the "Start Puff with Auto Met On" check box.

NOTE: IEM recommends using Auto Met.

Step 2: Manually Receive Tower Data

When Auto Met is off, the **New Met** button lights up (turns blue) to indicate that new met data is available for importing from the MetIngestor.

1. Click the **New Met** button.
2. The **Available MET Readings** dialog opens, listing all available met readings supplied by the Ingestor. A typical **Available MET Readings** dialog is shown below.



3. **Either** ⇒ select the met readings you want to import by clicking inside the appropriate check boxes

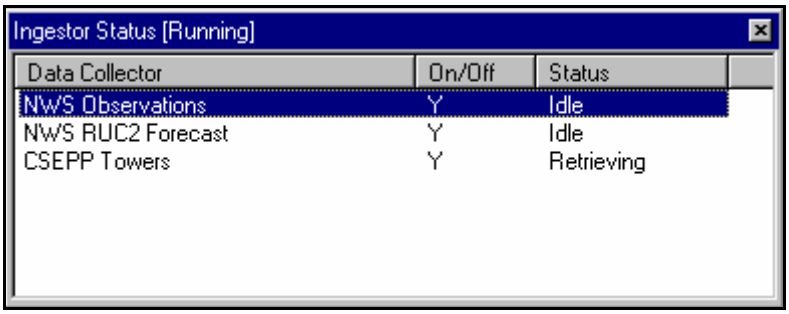
   Or ⇒ click on **Select All Recommended Readings**.

4. Click **OK** to load the readings into the current scenario.

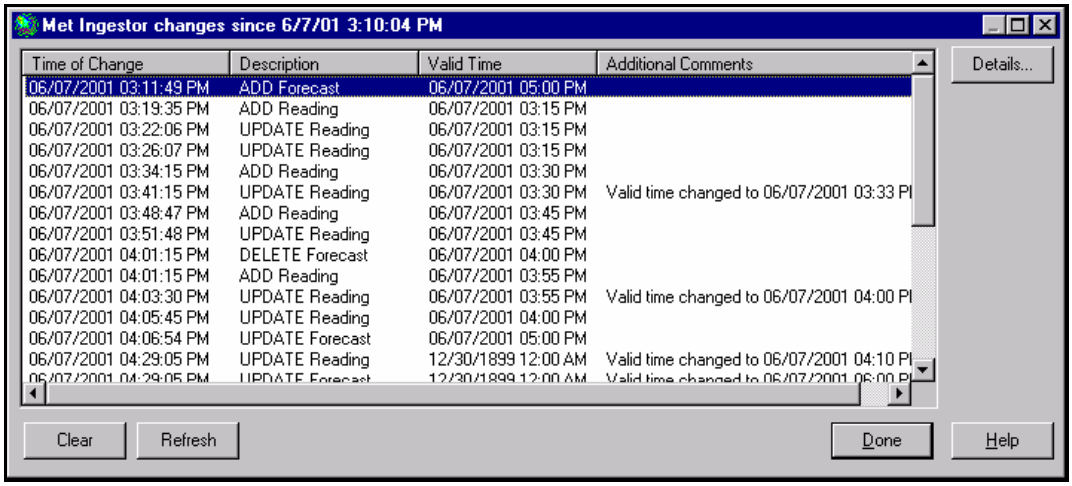
Step 3: Access the Ingestor Status Window

From the **Tools** menu, select:

1. **View Ingestor Status Window**. The **Ingestor Status** window displays information on the activity of the MetIngestor.



2. **View Met Ingestor History**. The **Met Ingestor History** dialog lists changes in met data since the last model run. A typical **Met Ingestor History** dialog is shown below.



In addition, the  light at the lower left corner of the main D2-Puff screen displays the status of the MetIngestor:

- **Green** – the MetIngestor is running and D2-Puff is receiving data.
- **Red** – D2-Puff is not receiving met data.

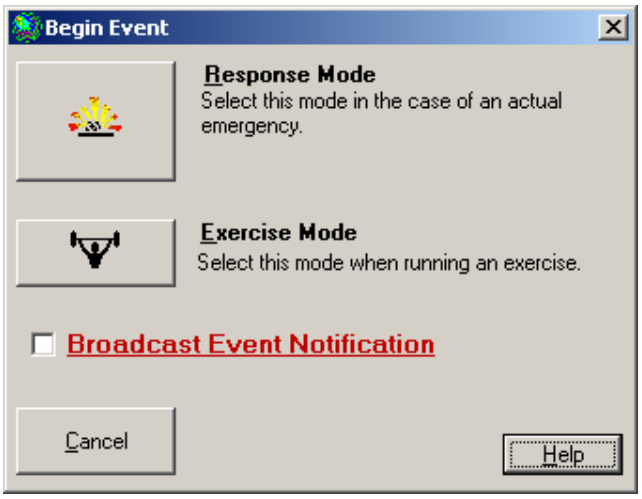
Declaring an Event (Onpost Function)

Begin Event clears all input fields and resets all D2-Puff settings to the site defaults. It also turns off Auto Met and loads the latest met data. The Event Start Time is set to the computer clock's current time.

Begin Event does not set a system-wide event; it only changes the mode of the computer that is currently running the puff model. It marks the file to be sent as **Response** or **Exercise**. When the data associated with this run is sent offpost, the offpost user will be prompted to switch to the Exercise or Response Mode (if they are not already in that mode) when they load the data.

Step 1: Begin an Event

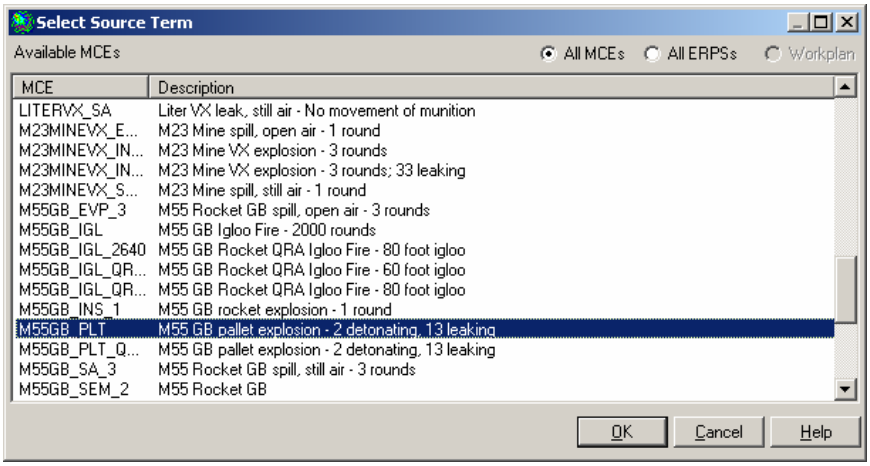
1. Click the **Begin Event** button at the bottom right of the D2-Puff main screen. The **Begin Event** dialog opens.



2. Select the "Broadcast Event Notification" check box to alert the other D2-Puff users that are connected to the local network and running D2-Puff that you have started an event. If a user is not logged in and using D2-Puff when you begin the event, they will not get the notification.
3. To respond to an actual event, click the **Response Mode** button. To run in Exercise mode, click the **Exercise Mode** button. For this tutorial, click the **Exercise Mode** button. The **Select Source Term** dialog opens.

Step 2: Select an MCE

1. From the **Select Source Term** dialog, select the file labeled **M55GB_PLT**, then click **OK**.



2. The **Complete Release Information** dialog opens. Enter a location, then click **OK** to close the **Complete Release Information** dialog.

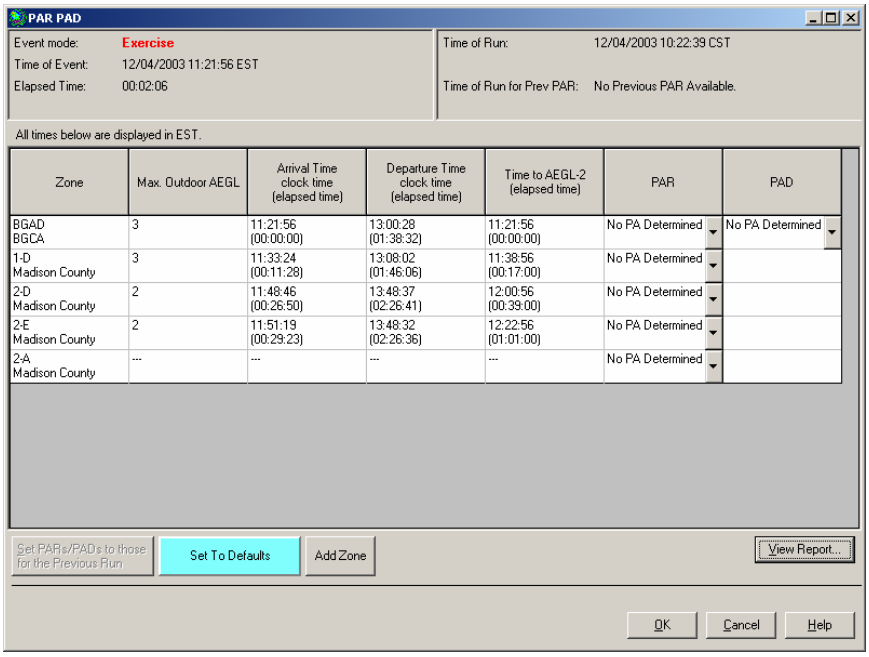
Step 3: Run the Scenario

Click the **Run** button at the bottom left of the D2-Puff main screen.

Step 4: Set PAR/PAD Data

Protective Action Recommendations (PARs) and Protective Actions Decisions (PADs) can be made for a D2-Puff model run. PAR/PAD information can then be broadcast offpost along with a scenario file.

1. After the scenario is finished running, the **PAR/PAD** button will be enabled (turns blue). Click the **PAR/PAD** button to open the PAR/PAD tool.



The information across the top of the PAR/PAD tool pertains to the scenario.

- **Event Mode** displays as Normal, Exercise, or Response.
- **Time of Event** displays as MM/DD/YYYY and HH:MM:SS.
- **Elapsed Time** displays the difference between the current time and the event start time in HH:MM:SS.
- **Time of Run** is the date and time of the current D2-Puff model run.
- **Time of Run for Prev PAR** will display as *No Previous PAR* the first time that PARs are set. If subsequent model runs are made, the time in this field will display the time that PARs were last made.

The grid displays the zones that are impacted by the plume and thus require a PAR/PAD. The information in the **PAR/PAD** dialog is sorted in order of zones by jurisdiction, arrival time, time to no effects or AEGL, and then maximum outdoor dosage or maximum outdoor AEGL.

- **Zone**—The information in this column is sorted by jurisdiction.
- **Maximum Outdoor Dosage** or **Maximum Outdoor AEGL** is the highest dosage or AEGL reached.
- **Estimated Indoor Dosage or Estimated Indoor AEGL** is the dosage or AEGL estimate used for the sheltering evaluation.
- **Arrival Time** of the plume in both elapsed and absolute time.
- **Departure Time** of the plume in both elapsed and absolute time.
- **Time to Dosage** or **Time to AEGL** represents the time to reach the highest dosage or AEGL.
- **PAR** — current PAR for that zone. If the run is a new run, the PARs that display will be the initial value that will be set to "No PA Determined." If a scenario is saved or broadcast with PAR information included, the appropriate PARs will display. If PARs were not set before the scenario was broadcast, the initial value of "No PA Determined" will display.
- **PAD** — current PAD for that zone.

SETTING PARS/PADS

1. Use the drop-down menu to select the appropriate PARs/PADs.
2. When PARs/PADs have been set, click **OK** button to save your selections.

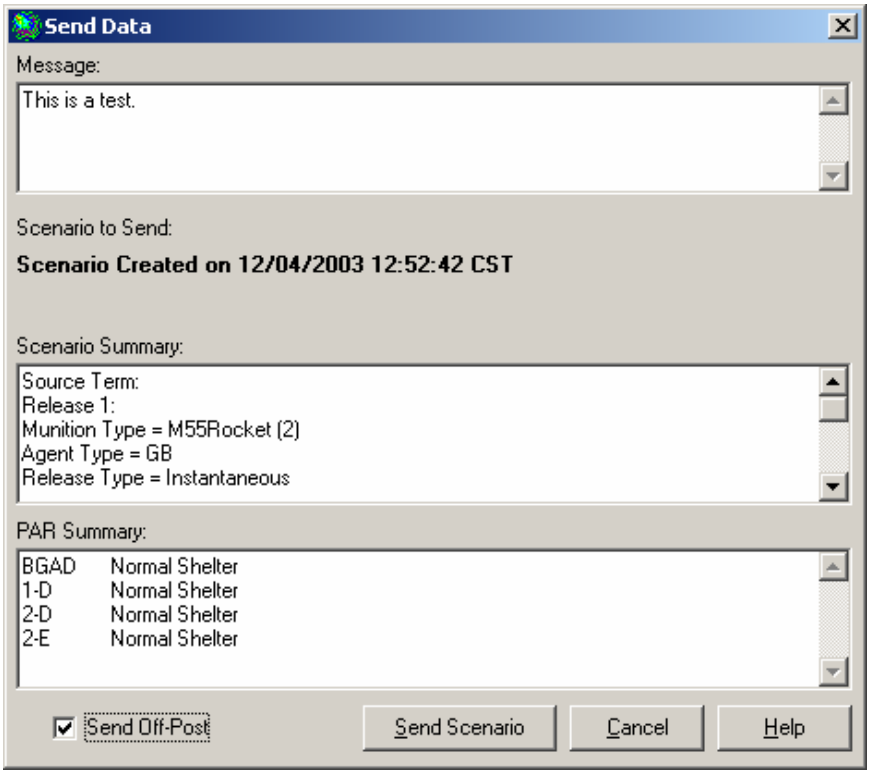
SETTING PARS/PADS TO THOSE FROM A PREVIOUS RUN

When you are setting PARs in Event Mode, you have the option to set PARs/PADs to previous using the **Set PARs/PAD to those for the Previous Run** button. This button is only available in Event or Response Mode. This option allows you to make adjustments to the model, such as using additional met data, and to rerun the model while keeping the same PARs that were originally set. In most instances, once PARs are set you would *not* want to change them, because the appropriate actions are set into motion based upon the original PARs.

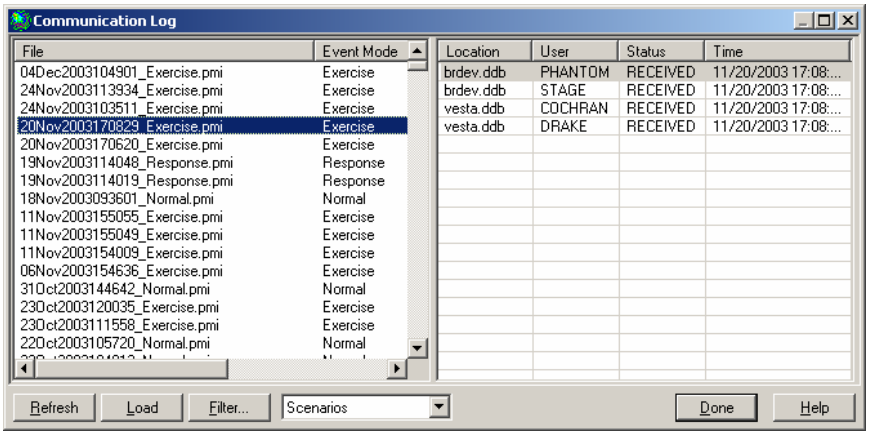
1. Accept New Met data by clicking the **New Met** button when it is enabled (lit blue). **NOTE:** You may need to let some time pass before the **Met** button will be enabled.
2. Rerun the model using the **Run** button.
3. Click the **PAR/PAD** button. Since the model has been rerun, the PARs and PADs will be set to 'No PA Determined.'
4. Click the **Set PARs/PADs to those for the Previous Run** button at the bottom left of the PAR/PAD main screen**.** When this button is invoked, the display of the information in the PAR/PAD grid will indicate certain information. Grayed zones are not affected by the risk envelope for the current run, but were affected in a previous run. PARs and PADs that display in bold were set from the previous run and are based on information different than what appears for the current run.

Step 5: Send Data

1. The **Send Data** button at the bottom of the D2-Puff main screen lights up (turns blue). Click it.
2. The **Send Data** dialog opens.



3. Type a message in the **Message** field.
4. Click the check box to send offpost.
5. Click the **Send Scenario** button. A message appears to let you know that the data has been sent.
6. Select **Communication ⇒ Communication Log** to view the Communication Log. A typical **Communication Log** is shown below.

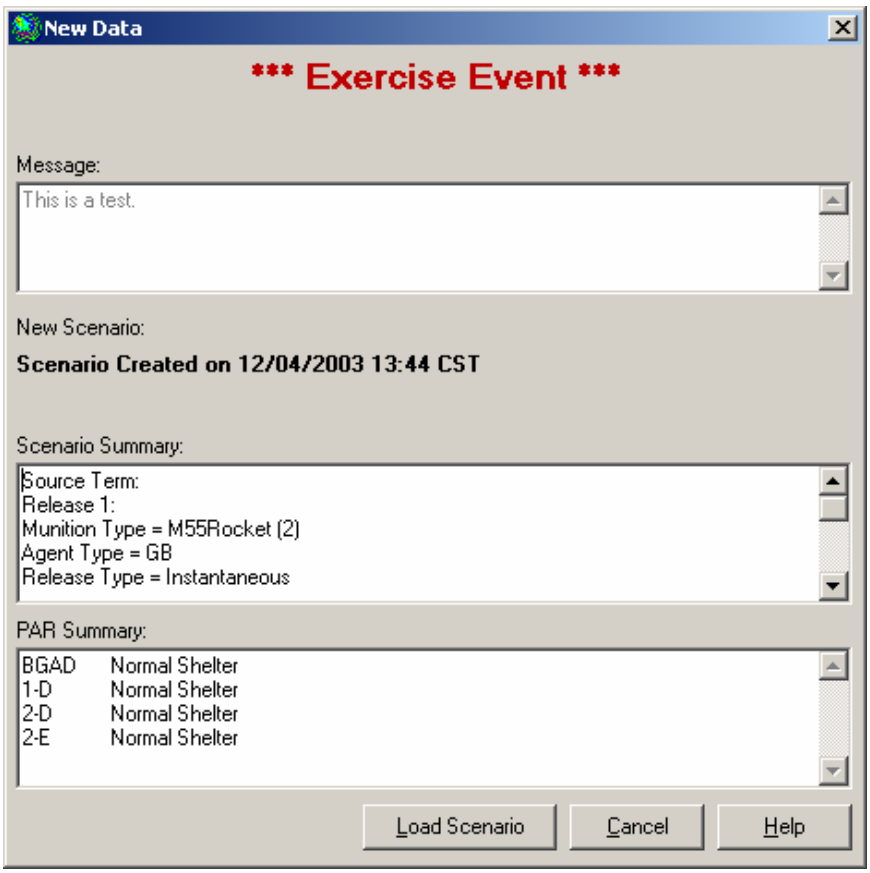


7. Use the drop-down menu to select logs for **Scenario** files, **Work Plan** files, or **Event Notifications**.
8. Scroll down and highlight the file that was sent. Look at the right pane to view the users who received the file, then click **Done**.
9. Click the **End Event** button at the bottom of the D2-Puff main screen to end the event. A message will prompt you to confirm.
10. Select the "Send notification that the event has ended" check box to notify other users on the local network that you have ended the event, then click **Yes** to confirm that you want to end the event.

Responding to an Event (Offpost Function)

Step 1: Receive Data

1. The **New Data** button lights up (turns blue) when new data has been sent. Click it.
2. The **New Data** dialog opens. Read the message. Note the **mode** the message was sent in.



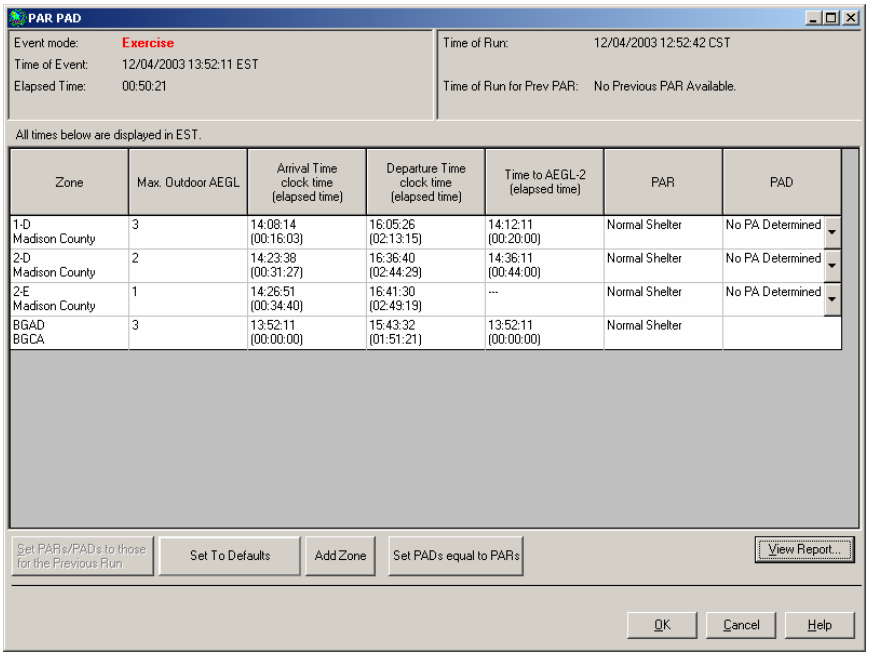
3. Click the **Load Scenario** button.
4. If you are in a different mode than the user who sent the scenario, a message will warn you that the scenario was sent in a different mode and ask if you want to switch into the new mode. Click **Yes**.

Step 2: Run the Scenario

Click the **Run** button at the bottom left of the D2-Puff main screen.

Step 3: View PAR/PAD Data

1. You can either run the scenario and then click the **PAR/PAD** button to view the PARs (step 1 above), or you can click the **PAR/PAD** button without running the scenario. The PAR/PAD tool will display as shown below:



For more detailed information regarding the data in the PAR/PAD tool see, *Set PAR/PAD Data* on page 12.

Step 4: End the Event

Click the **End Event** button to end the event.

Using Auto Run

When "Auto Run" is selected at the bottom of the D2-Puff main screen, the scenario will automatically be re-run when new data is imported from the MetIngestor.

Auto Run behaves differently depending upon whether it is running in Normal or Event Mode (Exercise or Response). We'll first look at Auto Run in Normal mode, then we'll look at Auto Run in Event mode.

Step 1: Turn on Auto Met

Select "Auto Met" at the bottom of the D2-Puff main screen.

Step 2: Load a Scenario

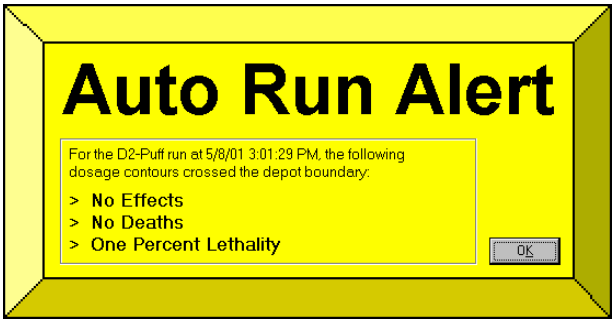
1. In the **Source Term** window, click the **MCE** button. The **Select Source Term** dialog opens.
2. Select the file labeled **M55GBPLT**, then click **OK**.
3. The **Complete Release Information** dialog opens. Enter a location, then click **OK** to close the **Complete Release Information** dialog.

Step 3: Run the Scenario

Click the **Run** button at the bottom left of the D2-Puff main screen.

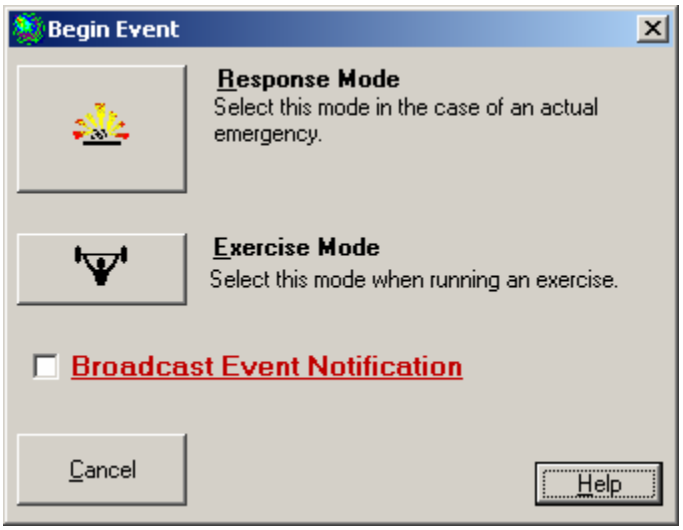
Step 4: Start Auto Run – Normal Mode

1. Select "Auto Run" at the bottom of the D2-Puff main screen.
2. When new met data becomes available, the accident start time is updated and the model is automatically rerun. If the selected dosages cross the depot boundary, D2-Puff displays an alert:



Step 5: Begin an Event

1. Click the **Begin Event** button at the bottom right of the D2-Puff main screen. The **Begin Event** dialog opens.

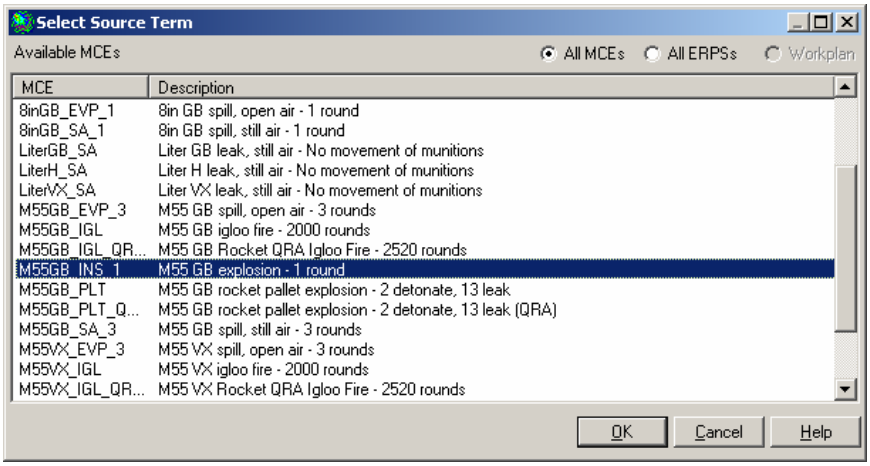


2. If you want to alert the other D2-Puff users that are connected to the local network and running D2-Puff that you have started an event, select the "Broadcast Event Notification" check box.
3. To respond to an actual event, click the **Response Mode** button. To run in Exercise mode, click the **Exercise Mode** button.

   For this tutorial, click the **Exercise Mode** button. The **Select Source Term** dialog opens.

Step 6: Select an MCE

1. From the **Select Source Term** dialog, select the file labeled **M55GB_INS_1**., then click **OK**.



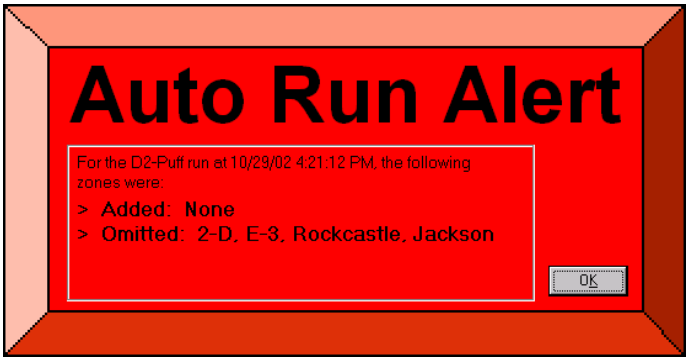
2. The **Complete Release Information** dialog opens. Enter a location, then click **OK** to close the **Complete Release Information** dialog.

Step 7: Run the Scenario

Click the **Run** button at the bottom left of the D2-Puff main screen.

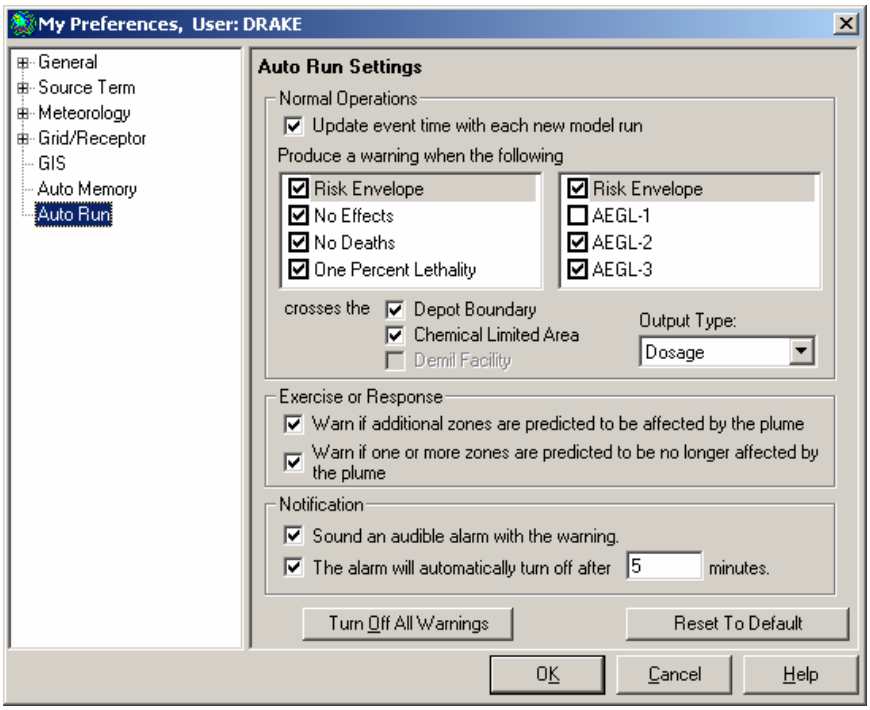
Step 8: Start Auto Run – Event Mode

1. At the bottom of the D2-Puff main screen, select "Auto Run."
2. When new met data becomes available, the accident start time stays the same, and the model is automatically re-run. If the new run impacts zones that were not impacted in the previous run or no longer impacts zones that were impacted in the previous run, D2-Puff displays an alert:



Step 9: Set Auto Run Options

1. From the **Tools** menu, select **My Preferences**. The **My Preferences** dialog opens.



2. Click on the **Auto Run** option. Here, you select setting options for creating a warning during Normal Operations and during an Event.

Step 10: Use the Auto Run Warning

In the **My Preferences** dialog, **Auto Run** (see above), you may:

1. Set the Auto Run alarm by selecting "Sound an audible alarm with the warning."
2. Specify when to turn off the alarm by entering the number of minutes and making sure the check box is selected.

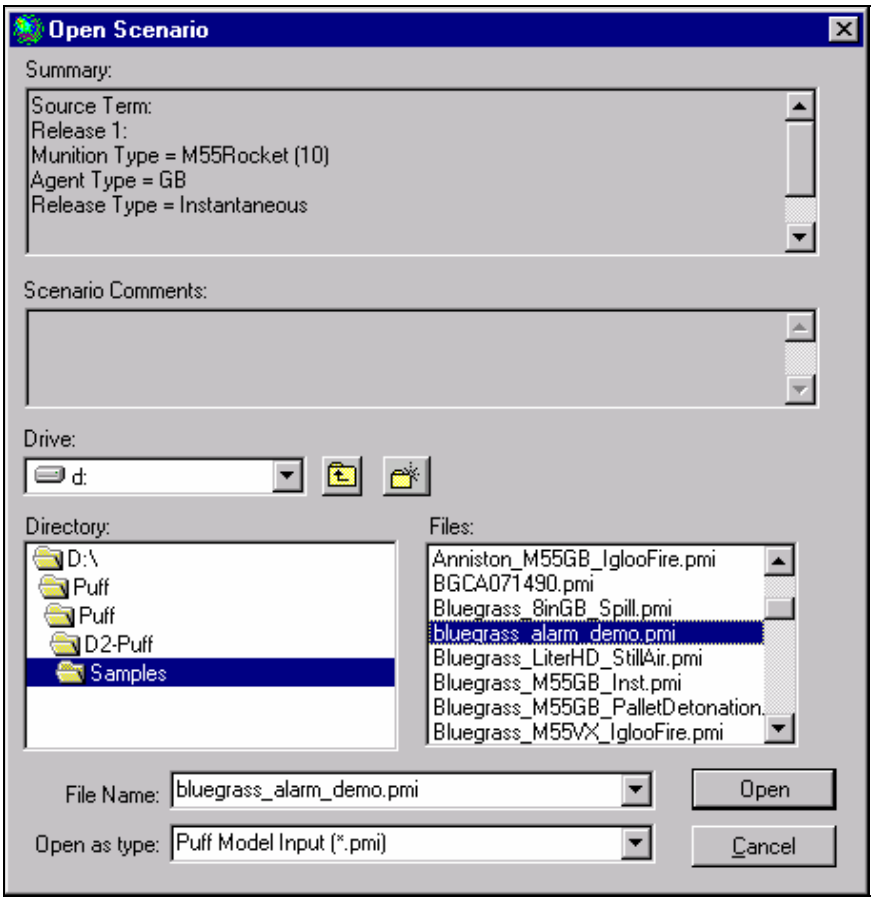
Step 11: View the Auto Run Log

From the **Tools** menu, select **View Auto Run** log. The Auto Run log lists the time of each run and which boundaries were crossed by the risk envelope and the dosages/AEGLS. The Auto Run log will also show what zones were added or omitted by the new run.

Using D2-Alarm

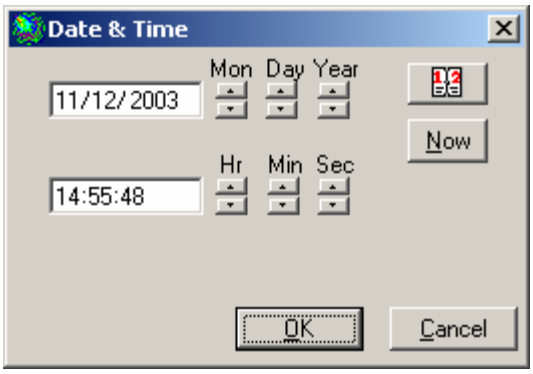
Step 1: Load a Scenario

1. Select **File** ⇒ **Open Scenario**.
2. From the **Open Scenario** dialog, locate the folder called **Samples**. Double-click on the folder to open it.



3. In the **Samples** folder, locate the file called **anniston_alarm_demo.pmi** and click on it.
4. Click the **Open** button to load the scenario.

5. At the bottom of the D2-Puff main screen, click on the clock icon. The **Date & Time** dialog opens.



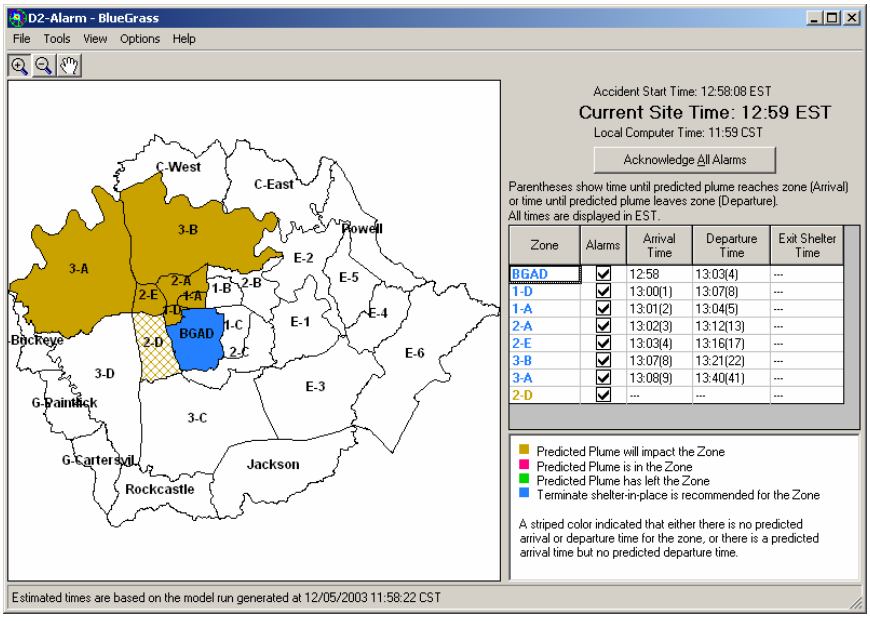
6. Click the **Now** button to set the Event Start Time to now, then click **OK**.

Step 2: Run the Scenario

Click the **Run** button at the bottom left of the D2-Puff main screen.

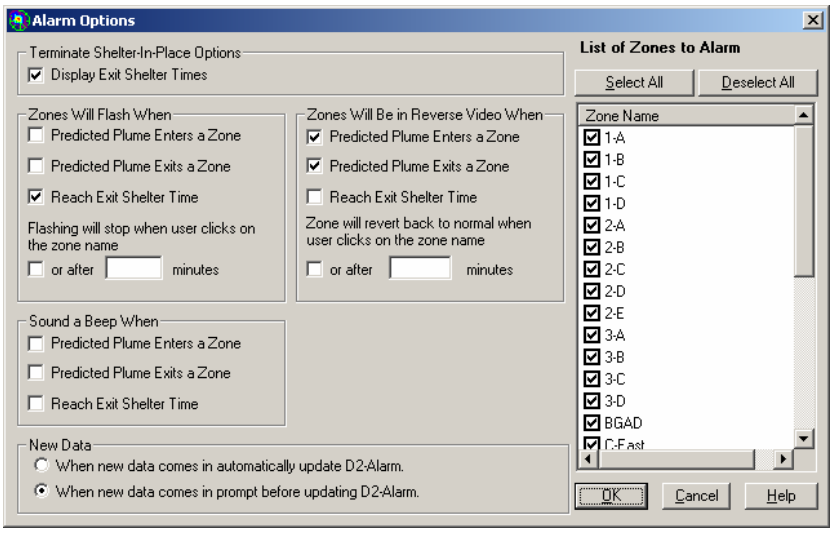
Step 3: Start D2-Alarm

1. From the **Tools** menu, select **D2-Alarm**. The D2-Alarm window opens. As the plume passes, the zones in the map will change colors to reflect the impact of the plume, as shown below:



Step 4: Set alarm options

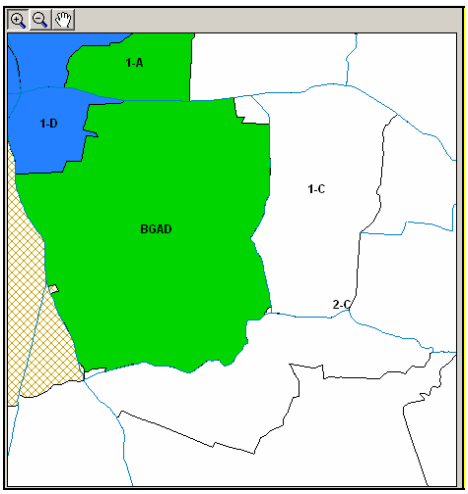
1. From the D2-Alarm **Options** menu, select **Setup Alarm**. The **Alarm Options** dialog opens.



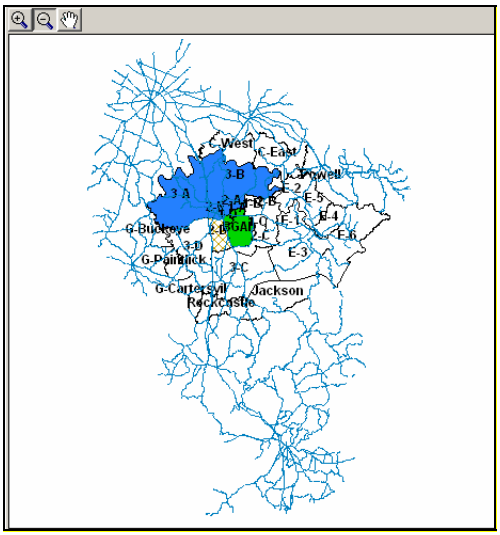
2. Click the check box(es) and radio buttons to select notification options, then click **OK**.

Step 5: Navigate the Zone Map

1. Zoom in on one of the zones by making sure the **Zoom In** button is depressed in the D2-Alarm toolbar and then clicking and dragging an area around a zone. The zoom level increases, with the map centering on the selected area.

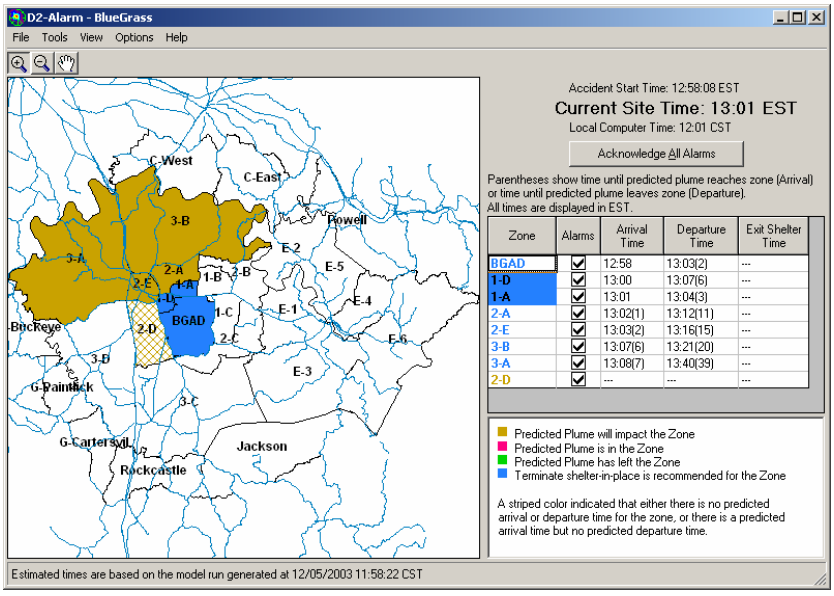


2. Zoom out by clicking on the **Zoom Out** button and then clicking once on the map. Click again on the map to zoom out farther.



3. Move the map's center of focus by clicking the pan button and then clicking and dragging the map around the map pane of the window.

4. View the map layers: from the D2-Alarm **View** window, select **Map Layers ⇒ Roads**. Roads are now represented on the map:



Step 6: View the Zone List

Note that each zone is listed to the right of the map, along with the arrival and departure times of the plume.

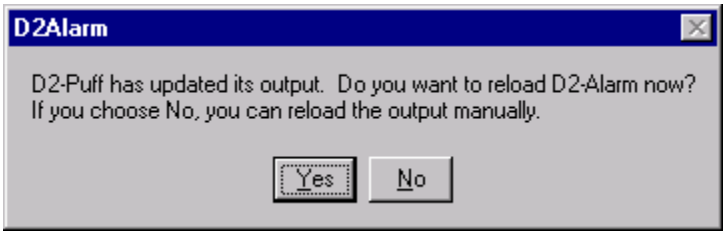
Zone	Alarms	Arrival Time	Departure Time	Exit Shelter Time
BGAD	☑	12:58	13:03	---
1-D	☑	13:00	13:07(4)	---
1-A	☑	13:01	13:04(1)	---
2-A	☑	13:02	13:12(9)	---
2-E	☑	13:03	13:16(13)	---
3-B	☑	13:07(4)	13:21(18)	---
3-A	☑	13:08(5)	13:40(37)	---
2-D	☑	---	---	---

1-D

Click the **Acknowledge All Alarms** button above the zone list when zone names flash or appear in reverse video.

Step 7: Rerun D2-Puff and Reload D2-Alarm

1. In D2-Puff, change the Event Start Time to now by clicking on the clock button and then clicking on the **Now** button in the **Date & Time** dialog.
2. Click **OK** to close the **Date & Time** dialog.
3. Rerun the scenario by clicking the **Run** button.
4. Return to the D2-Alarm window by clicking on D2-Alarm icon. The following message appears:



5. Click **Yes** to reload D2-Alarm.

Step 8: View the Status Change Summary

When D2-Alarm is reloaded, the Status Change Summary opens in Adobe® Acrobat®. The report lists changes in impact—which zones are no longer impacted and which new zones will be impacted. It also lists revised arrival and departure times.

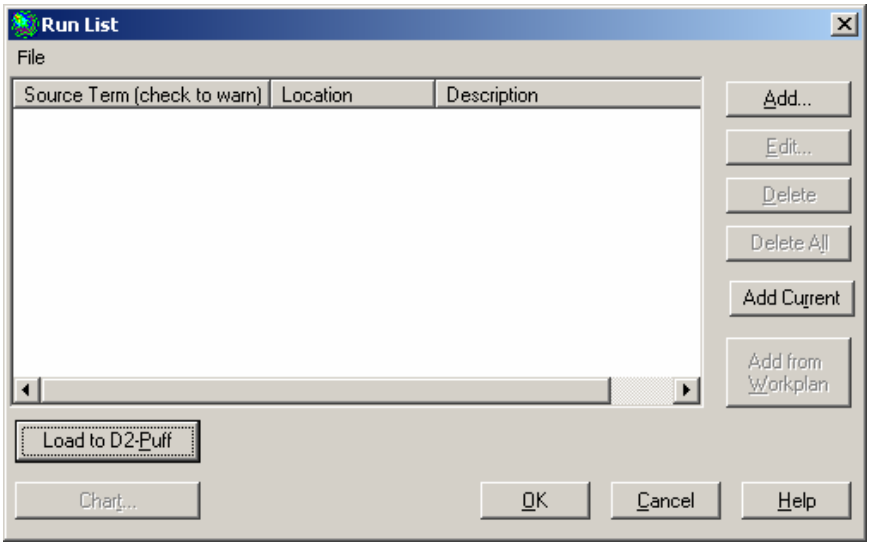
Using D2-Chart

D2-Chart is a tool that allows users to compare the different MCEs that are run through the D2-Puff computational module. During Normal Operations, the onpost user can specify a list of MCEs to compare. D2-Chart then processes the MCEs and displays the output for each in side-by-side charts.

If Auto-Chart is turned on, D2-Chart runs the MCEs again when meteorological data changes.

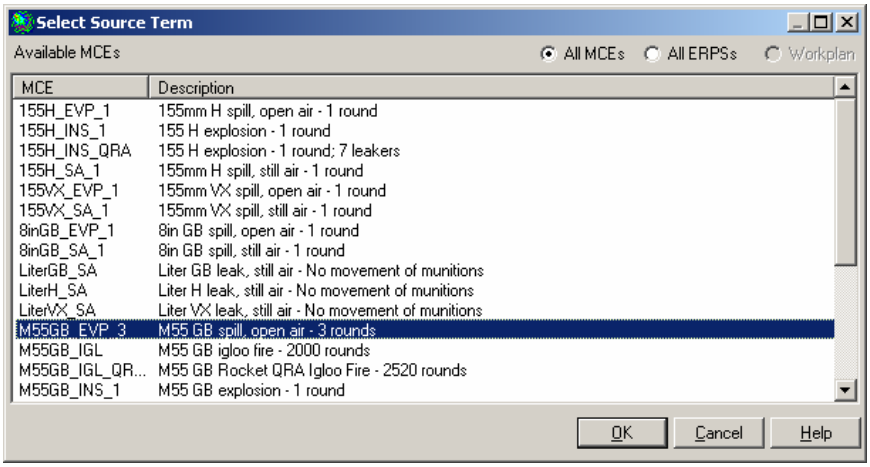
Step 1: Open the Run List for D2-Chart

1. On the D2-Puff main screen, make sure the "Auto Met" check box is selected.
2. From the **Tools** menu, select **D2-Chart**.
3. The **Run List** dialog opens.

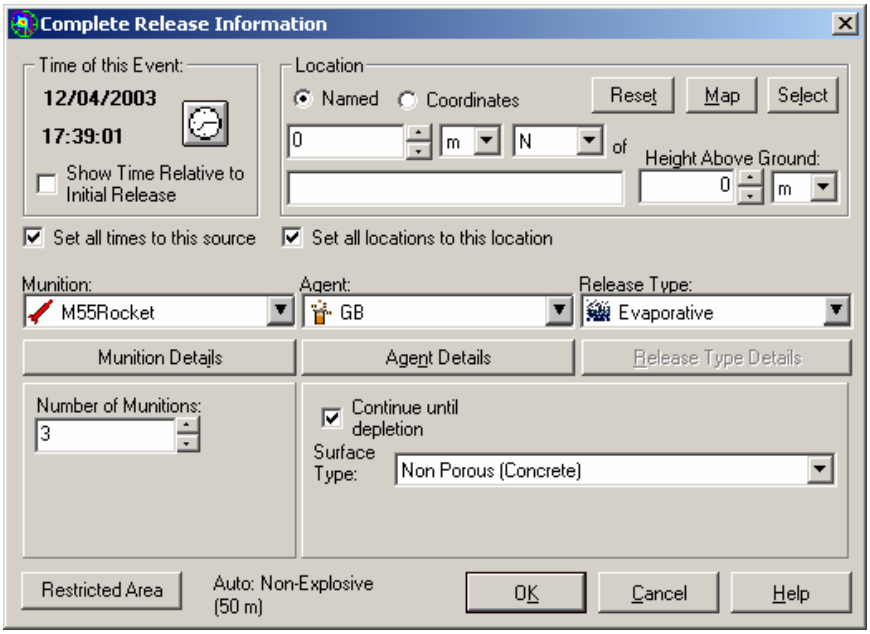


Step 2: Add an MCE to Run List

1. Click the **Add** button in the **Run List** dialog. The **Select Source Term** dialog opens.



2. From the **Select Source Term** dialog, select the file labeled **M55GB_EVP_3**.
3. Click **OK**. The **Complete Release Information** dialog opens.



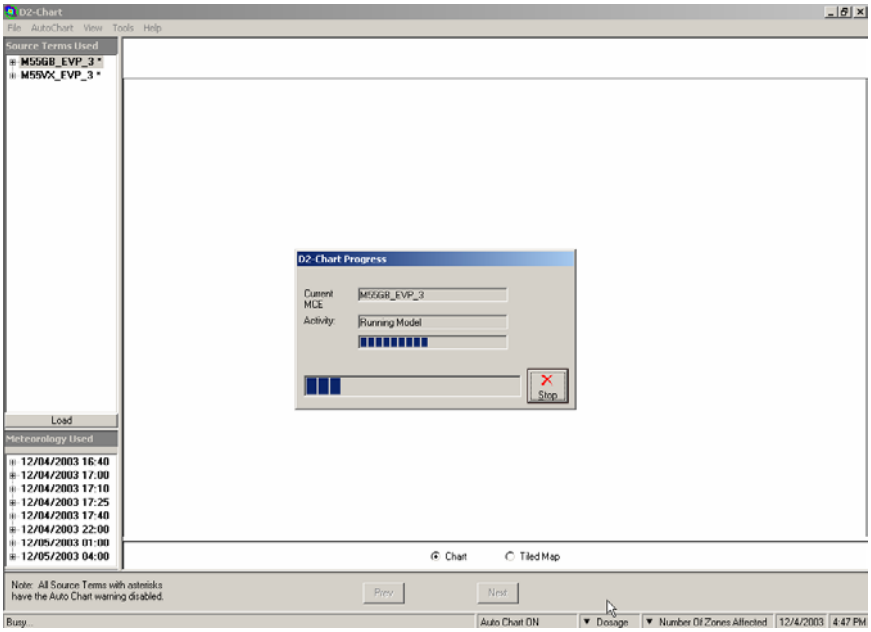
4. Enter a location, then click **OK** to close the **Complete Release Information** dialog. The selected MCE appears in the **Run List** dialog.

Step 3: Add another MCE to the Run List

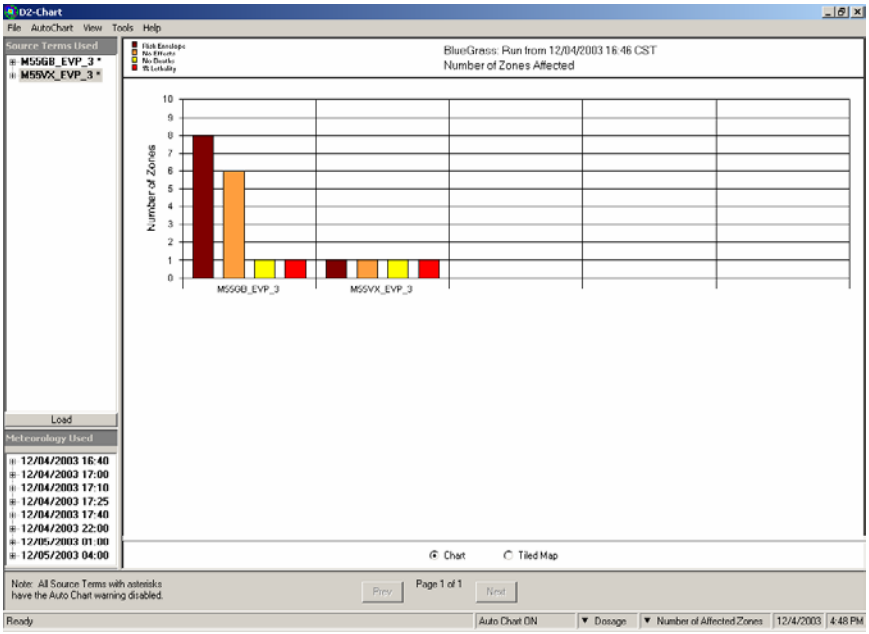
1. Click the **Add** button
2. From the **Select Source Term** dialog, select the file labeled **M55VX_EVP_3**.
3. Enter a location in the **Complete Release Information** dialog.
4. Click **OK** to close the **Complete Release Information** dialog. The selected MCE appears in the **Run List** dialog.

Step 4: Start D2-Chart

1. In the **Run List** dialog, click the **Chart** button.
2. D2-Puff will start up the D2-Chart program. The **D2-Chart** dialog will open with a **D2-Chart Progress** dialog displayed. The **D2-Chart Progress** dialog will show the user which MCE is being run through the computational module.

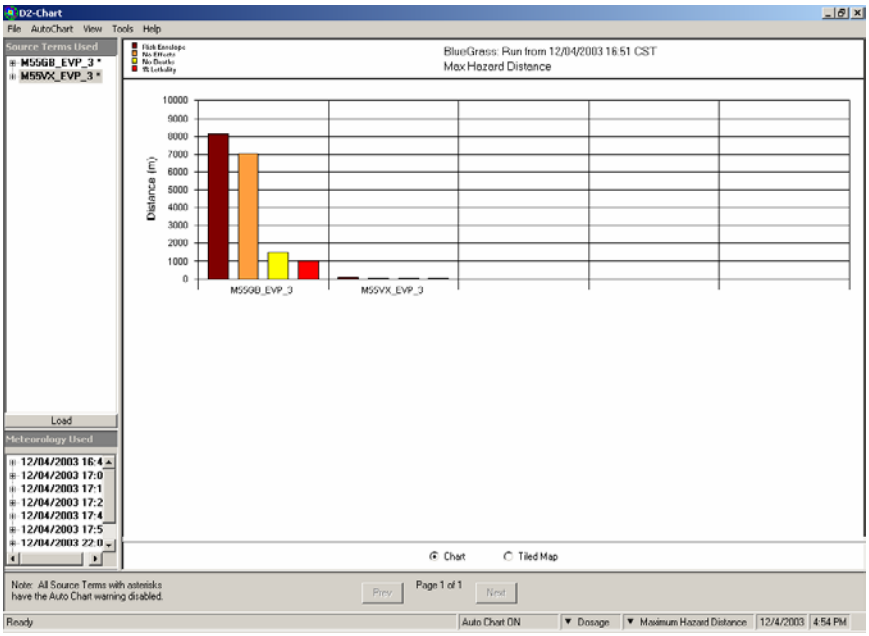


3. When all the MCEs are run through the computational module, the **D2-Chart** dialog will be updated and displays the output for each MCE in side-by-side charts.



Step 5: Change the Output of D2-Chart

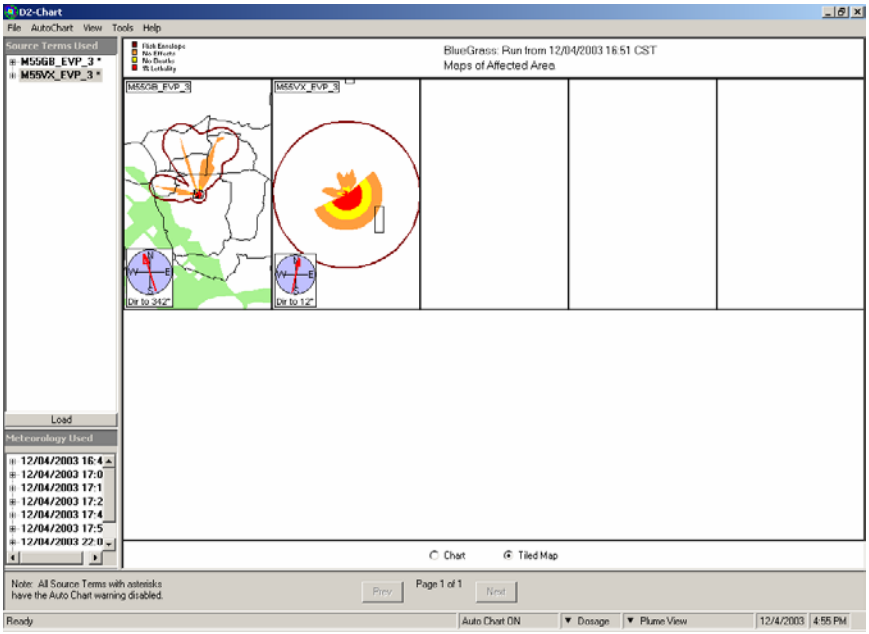
1. From the **D2-Chart** dialog, click on the drop-down list on the status bar (at the bottom on the dialog) that says **Number of Zones Affected**.
2. Select **Maximum Hazard Distance** from the list.
3. The **D2-Chart** dialog is refreshed and the charts show maximum hazard distance for each MCE.



Step 6: View the Output of D2-Chart in Tiled Maps

You can also view a map for each MCE or ERPS that is in the run list.

1. Click the "Tiled Map" radio button. Each tile will show a plume along with zones, the depot boundary, the CLA boundary, igloos, and terrain. The map can be displayed in several views.



2. Select **View ⇒ Output ⇒ Tiled Map Output**. The view options include the following:

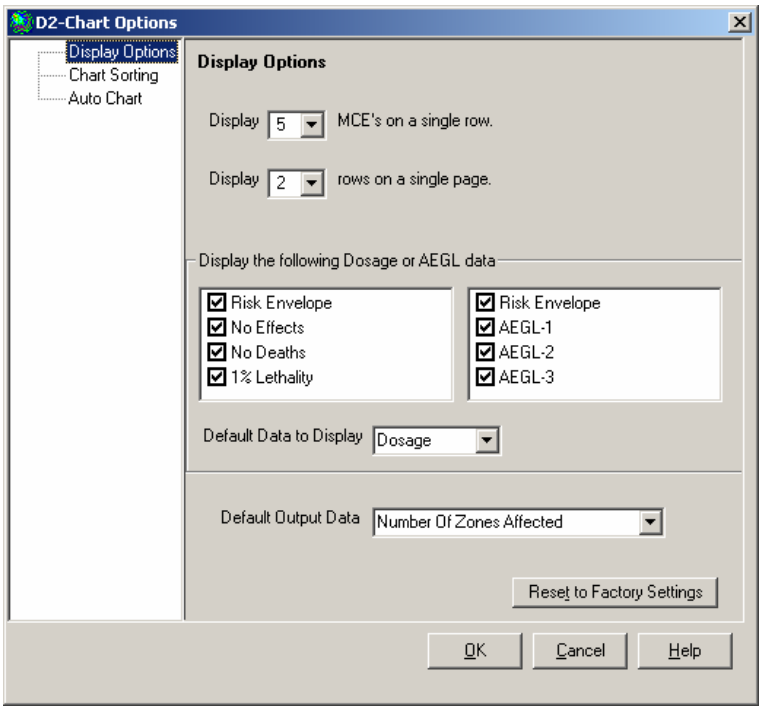
   - **Plume View**—the view that normally appears when D2-Puff runs a scenario.
   - **Depot View**—the map will be zoomed to a level in which you can see the depot boundary.
   - **Full Area View**—the map will be zoomed all the way out so that you can see all of the zones.

Step 7: Rerun D2-Chart using Auto Chart

1. When new met data becomes available, a warning message will appear on the **D2-Chart** dialog telling the user that D2-Chart will run again in so many seconds.
2. Wait for the warning message to close (after 5 seconds) and the D2-Chart program will run the MCEs again using the new met data.
3. After D2-Chart has rerun the MCEs, the charts in the **D2-Chart** dialog will be updated.

Step 8: Set the D2-Chart Options

1. From the D2-Chart **Tools** menu, select **Options**. The **D2-Chart Options** dialog opens.



2. In the **D2-Chart Option** dialog, you can specify which dosages or AEGLs to display, change the way the charts are displayed in the **D2-Chart** dialog, and set the warning options.
3. Click **OK** to save your selections.

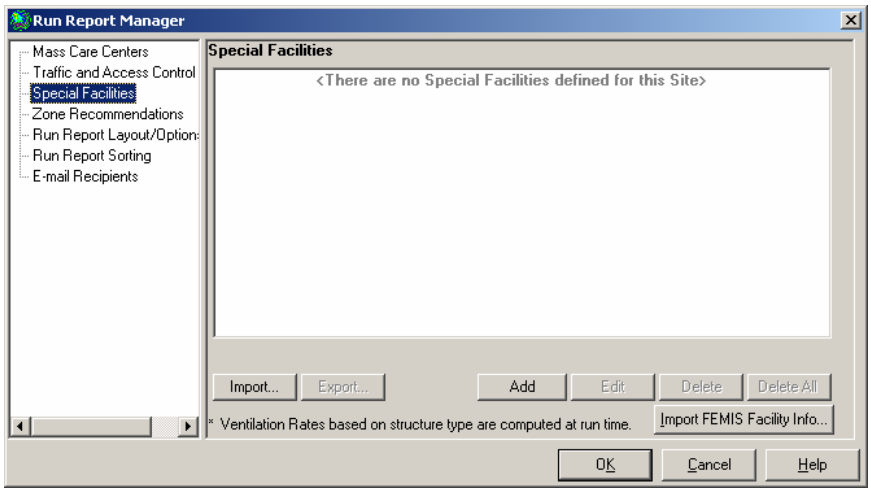
Using D2-Puff Shelter Analysis

From the **File** menu, select **Open Scenario**. In the **Open Scenario** dialog, locate the file called **bluegrass_sheltering_demo.pmi** in the **Samples** folder and open it.

Step 1: Configure the Special Facilities in the Run Report

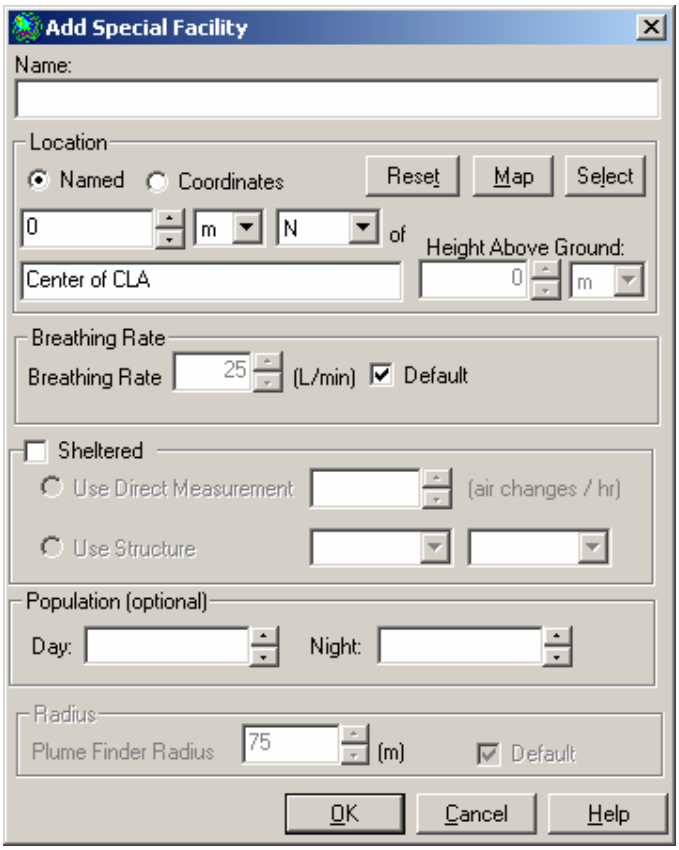
Select **Configure** ⇒ **Run Report Manager** ⇒ **Special Facilities**. The **Run Report Manager** opens.

NOTE: The FEMIS Bridge Tool allows FEMIS users to import their special facilities into D2-Puff. See your system administrator for more information.

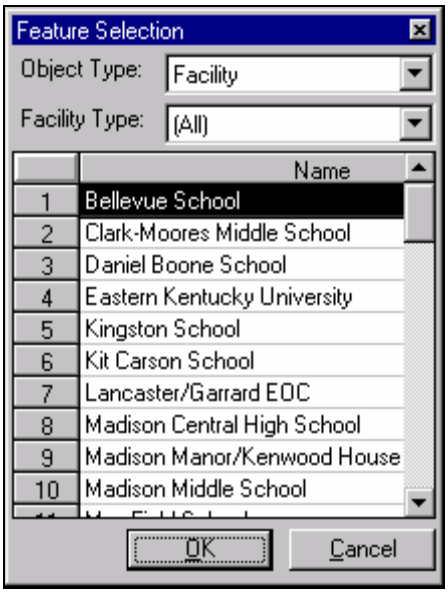


Step 2: Add a Special Facility

1. Click the **Add** button. The **Add Special Facility** dialog opens.



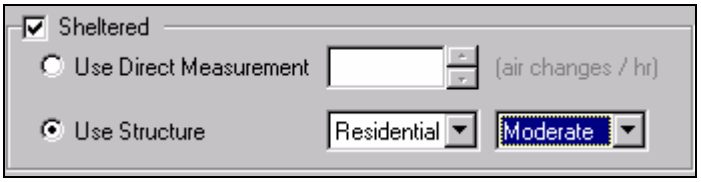
2. Click the **Select** button to select a location. The **Feature Selection** dialog opens.



3. From the **Facility Type** drop-down list, select **School**. This filters the list so only schools are displayed.
4. Select **Bellevue School**, then click **OK**. **Bellevue School** appears in the **Name** field of the **Add Special Facility** dialog.

Step 3: Enter the Air Exchange Rate

1. In the **Add Special Facility** dialog, select "Sheltered" to indicate that the structure is sheltered.
2. For the air exchange rate, select **Use Structure**. D2-Puff will calculate the air exchange rate based on the type of structure you select.
3. From the first drop-down list, select **Residential**.
4. From the second drop-down list, select **Moderate**. The **Sheltered** frame of the **Add Special Facility** dialog should now look like this:



5. Click **OK** to close the **Add Special Facility** dialog.

Step 4: Add more Special Facilities

1. In Run Report Manager, click the **Add** button to add a new special facility.
2. In the **Add Special Facility** dialog, click the **Select** button to select a location.
3. In the **Feature Selection** dialog, select **School** from the **Facility Type** drop-down list, and then select **White Hall School** from the list. Click **OK** to close the **Feature Selection** dialog.
4. In the **Add Special Facility** dialog, select "Sheltered."
5. For the air exchange rate, select **Use Structure**.
6. From the first drop-down list, select **Commercial**.
7. From the second drop-down list, select **Moderate**.
8. Click **OK** to close the **Add Special Facility** dialog.
9. In Run Report Manager, click the **Add** button to add a new special facility.
10. In the **Add Special Facility** dialog, click the **Select** button to select a location.
11. In the **Feature Selection** dialog, select **School** from the **Facility Type** drop-down list, and then select **Patty A. Clay Hospital** from the list. Click **OK** to close the **Feature Selection** dialog.
12. In the **Add Special Facility** dialog, select "Sheltered."
13. For the air exchange rate, select **Use Structure**.
14. From the first drop-down list, select **Commercial**.
15. From the second drop-down list, select **Tight**.
16. Click **OK** to close the **Add Special Facility** dialog.
17. In Run Report Manager, click the **Add** button to add a new special facility.
18. In the **Add Special Facility** dialog, click the **Select** button to select a location.
19. In the **Feature Selection** dialog, select **School** from the **Facility Type** drop-down list, and then select **Daniel Boone School** from the list. Click **OK** to close the **Feature Selection** dialog.
20. In the **Add Special Facility** dialog, select "Sheltered."

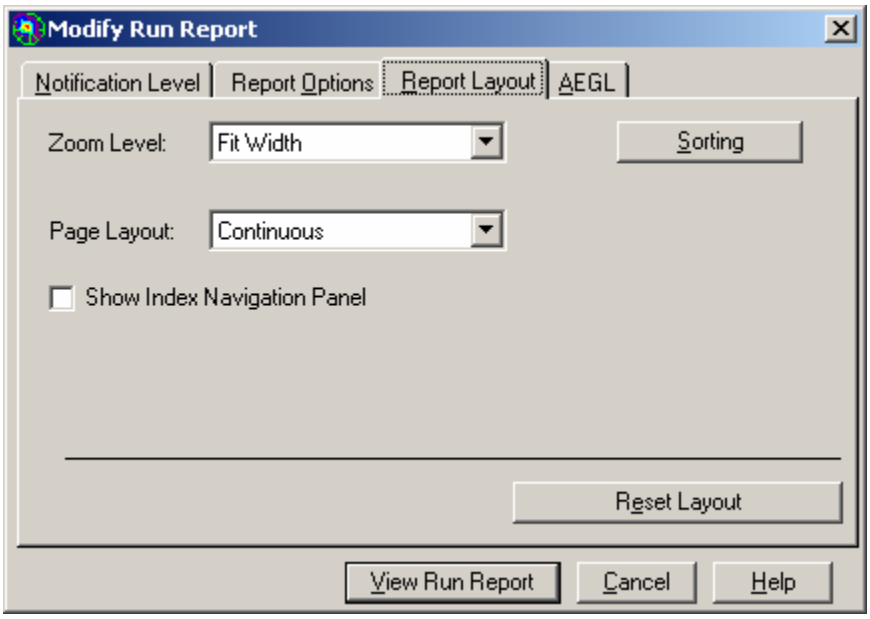
21. For the air exchange rate, select **Use Structure**.
22. From the first drop-down list, select **Commercial**.
23. From the second drop-down list, select **Pressurized**.
24. Click **OK** to close the **Add Special Facility** dialog.

Step 5: Run the Scenario

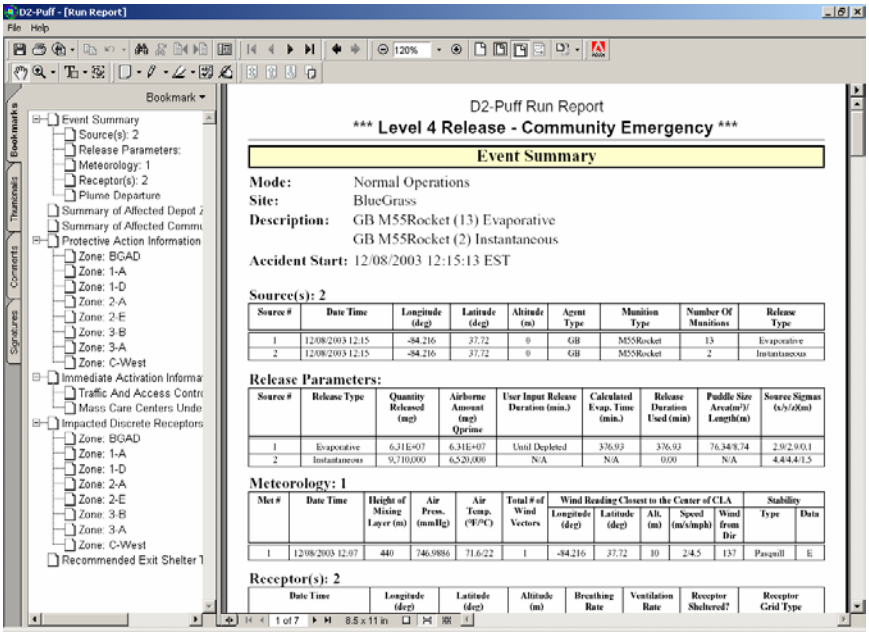
Click the **Run** button at the bottom left of the D2-Puff main screen.

Step 6: Open the Run Report

1. From the **Output** menu, select **View Run Report**. The **Modify Run Report** dialog opens.



2. Click on the **Report Layout** tab.
3. Select the "Show Index Navigation Panel" check box. This will allow you to navigate through the Run Report using the bookmarks listed in the **Index Navigation** pane.
4. In the **Modify Run Report** dialog, click the **View Run Report** button. The Run Report opens in Adobe® Acrobat®.



Step 7: View the Impacted Discrete Receptors Table

1. In the **Index Navigation** pane, located to the left of the Run Report document, make sure the tab labeled **Bookmarks** is selected. Click on the **Impacted Discrete Receptors (By Zone)** bookmark.
2. The Run Report moves to the Impacted Discrete Receptors section.

3. If necessary, click the **Zoom In** button and then click on a point in the document to zoom in on the document.

Step 8: View the Sheltered Dosage after Tail Time Table

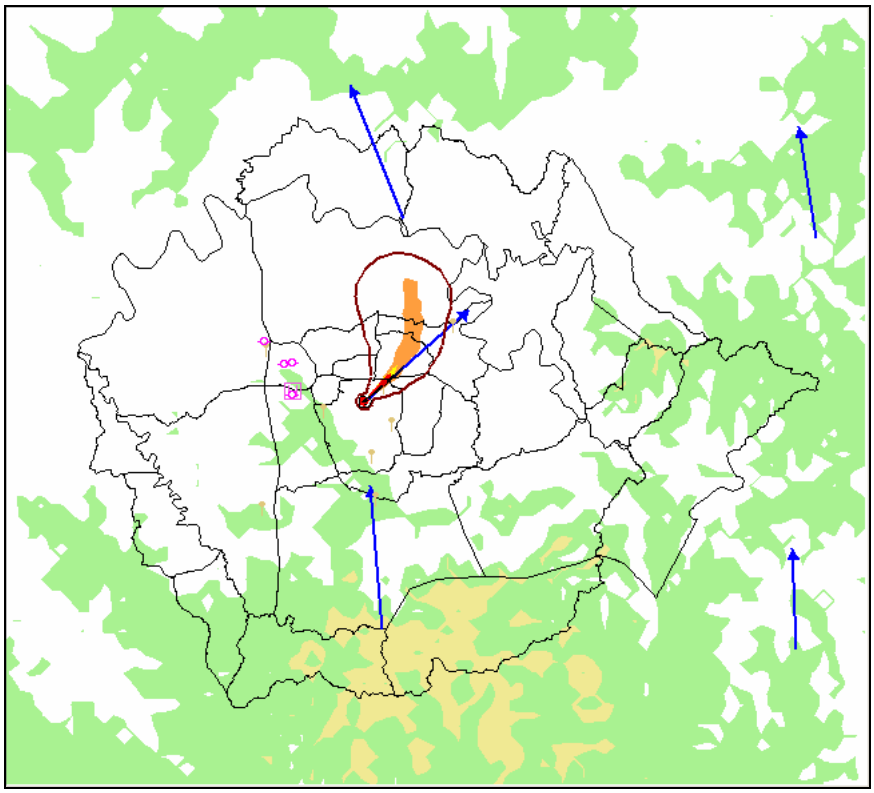
1. In the **Index Navigation** pane, located to the left of the Run Report document, make sure the tab labeled **Bookmarks** is selected. Click on the **Sheltered Dosage after Tail Time Table** bookmark.
2. The Run Report moves to the Sheltered Dosage after Tail Time section.

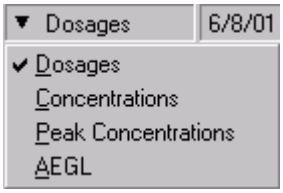
Using D2-Puff GIS Output

From the **File** menu, select **Open Scenario**. In the **Open Scenario** dialog, locate the file called **bluegrass_concentration_demo.pmi** in the **Samples** folder. Run the scenario.

Step 1: View Output of Dosages, Concentrations, Peak Concentrations, and AEGLs

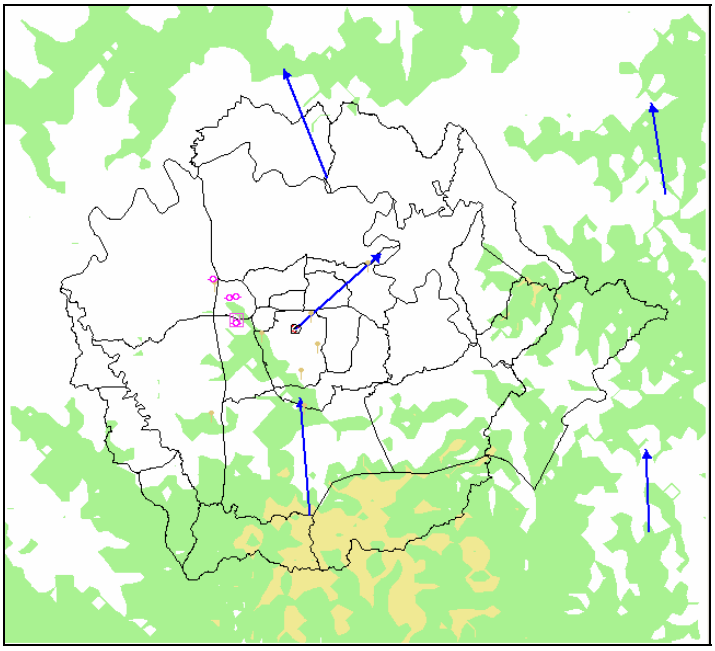
At the bottom of the D2-Puff main screen, locate the drop-down list currently labeled **Dosages**. Note the map display:



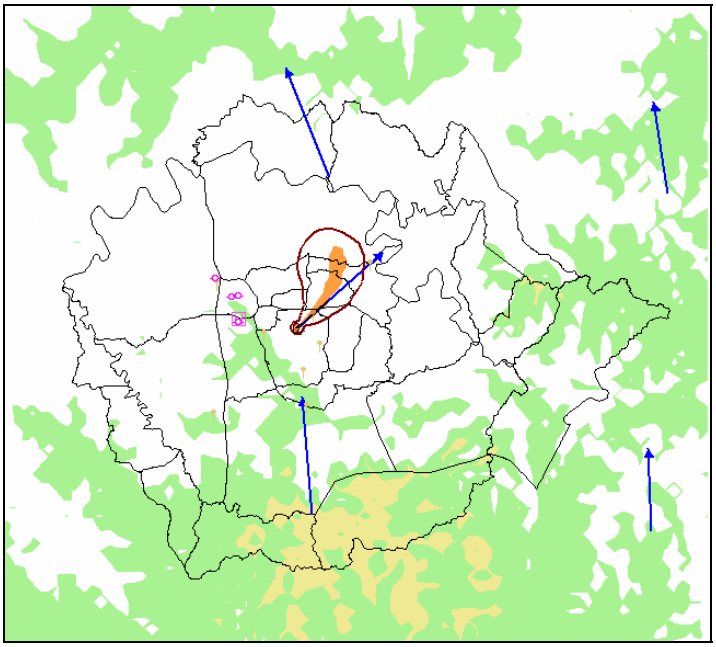


Click on the drop-down arrow to display the list of output choices:

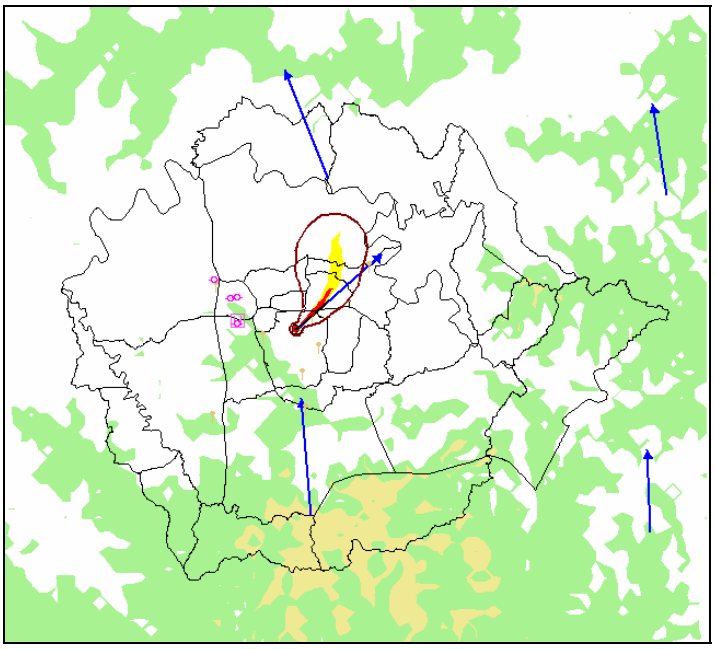
1. Select **Concentrations**. Note the way the map display changes:



2. Select **Peak Concentrations**. Notice the way the map display changes:



3. Select **AEGL**. Notice the way the map display changes:



Step 2: Use the Dosage Tool

1. Click the **Display Dosage** button.
2. Click on the map:
   - Inside the plume
   - Outside the plume, but inside the risk envelope
   - Outside the risk envelope

Step 3: Use the Information Tool

1. Click the **Select GIS Feature** button.
2. Click on a met tower.

3. Click the **Display Selected Location Information** button.

Using the D2-Puff Run Report

From the **File** menu, select **Open Scenario**. In the **Open Scenario** dialog, locate the file called **bluegrass_run_report_demo.pmi** in the **Samples** folder and open it.

Step 1: Configure the Run Report

1. Select **Configure ⇒ Run Report Manager**.

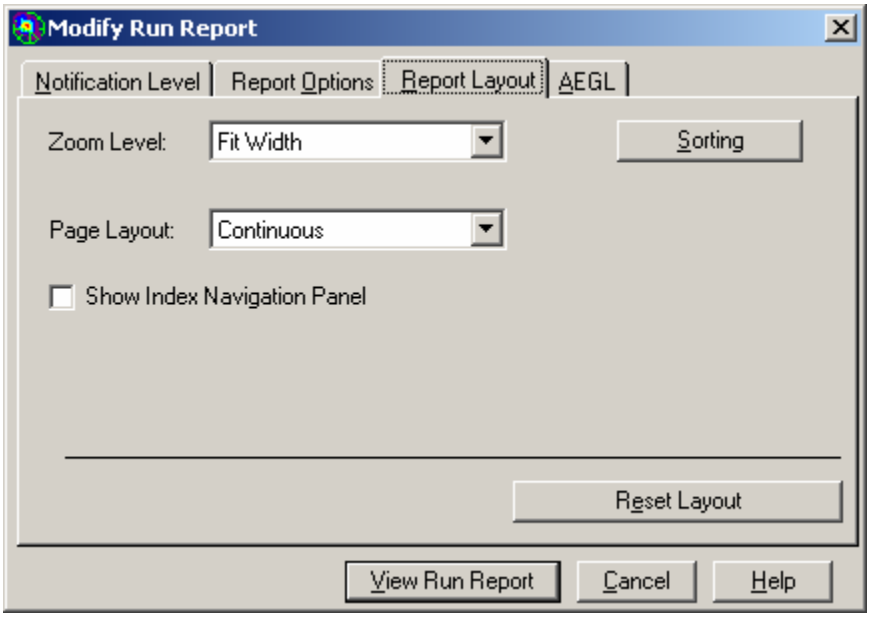
   Note: You must be given privileges by the administrator in order to access the **Configure** menu items.

2. Select:

   - **Mass Care Centers**
   - **Traffic and Access Control Points**
   - **Zones Recommendations**

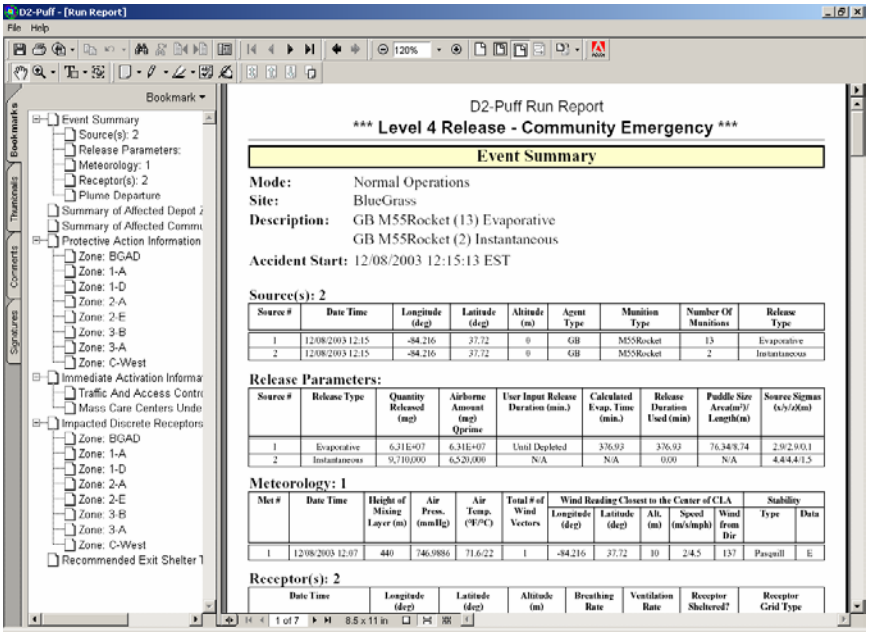
Step 2: View the Run Report

1. From the **Output** menu, select **View Run Report**. The **Modify Run Report** dialog has four tabs: **Notification Level**, **Report Options**, **Report Layout**, and either **Dosages of Interest** or **AEGL** (depending on which type of report is selected as the default).
2. In the **Modify Run Report** dialog, click on the **Report Layout** tab.



3. Select the "Show Index Navigation Panel" checkbox. This will allow you to navigate through the Run Report using the bookmarks listed in the **Index Navigation** pane.

4. In the **Modify Run Report** dialog, click the **View Run Report** button. The Run Report opens in Adobe® Acrobat®.



Step 3: View the Event Summary

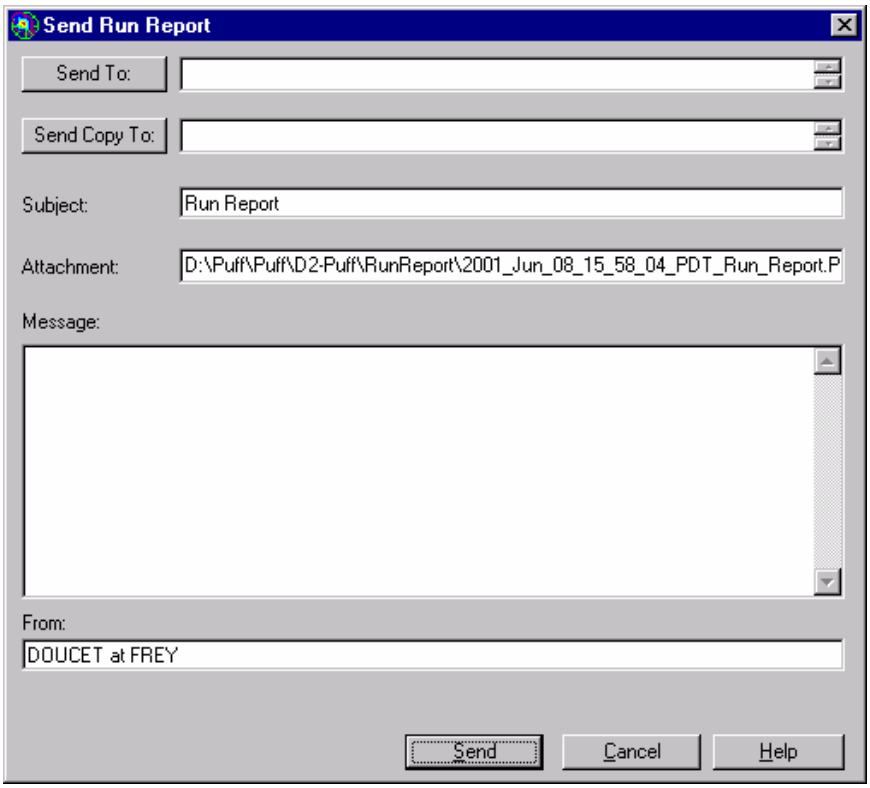
1. In the **Index Navigation** pane, located to the left of the Run Report document, make sure the tab labeled **Bookmarks** is selected. Click on the **Event Summary** bookmark.
2. The Run Report moves to the Event Summary section.
3.  If necessary, zoom in on the document: click the **Zoom In** button and then click on a point in the document.

Step 4: View the Summary of Affected Zones

1. In the **Index Navigation** pane, click on the **Summary of Affected Depot Zones** bookmark.
2. Click on the **Summary of Affected Community Zones** bookmark.

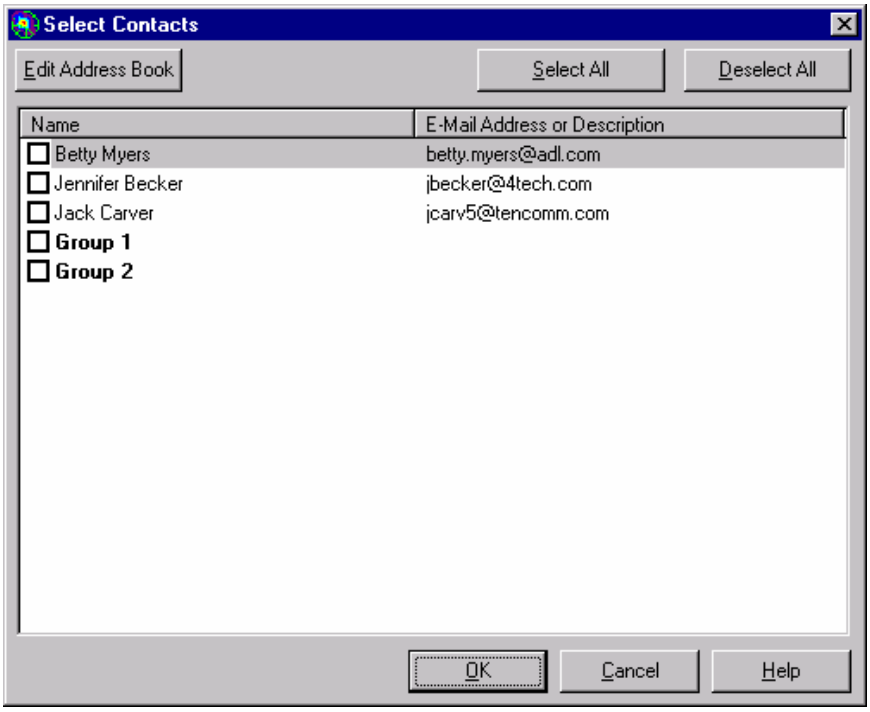
Step 5: E-mail the Run Report

1. From the Run Report **File** menu, select **Send To ⇒ Mail Recipient**. The **Send Run Report** dialog opens.



2. Click the **Send To:** button to select a recipient. The **Select Contacts** dialog opens.

   NOTE: The default subject line is set in the Run Report Manager. See your system administrator for more information.



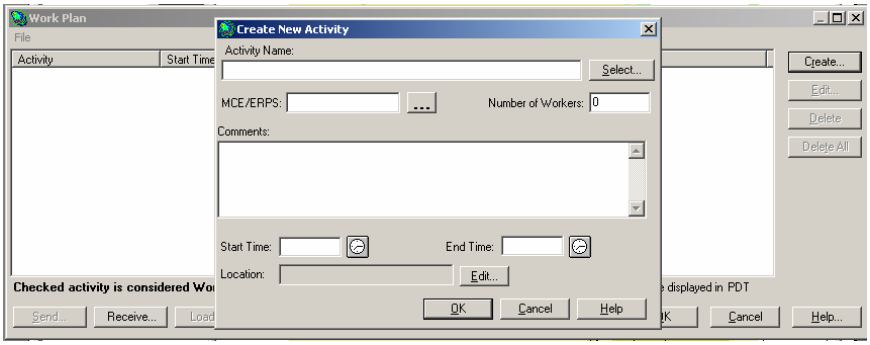
3. Select a recipient by clicking the box next to the recipient's name.
4. Click **OK** to close the **Select Contacts** dialog.
5. In the **Send Run Report** dialog, click the **Send** button.

Using the D2-Puff Work Plan

The **Work Plan** allows users to create a list of daily work activities along with details such as the starting time, the ending time, and the location for each activity. Because each activity represents work in the storage yards or in the demilitarization facility on a particular day, Work Plan activities can be associated with **MCEs** or **ERPSs**. The onpost user sends Work Plans offpost to inform other jurisdictions of the activities occurring on at the site.

Step 1: Open the Work Plan

1. From the D2-Puff **Tools** menu, select **Work Plan**. When the **Work Plan** dialog is opened for the first time, it will not display any activities. After a Work Plan is loaded or created, the **Work Plan** dialog will continue to display the Work Plan activities unless D2-Puff is closed.
2. Click the **Create** button. The **Create New Activity** dialog opens.

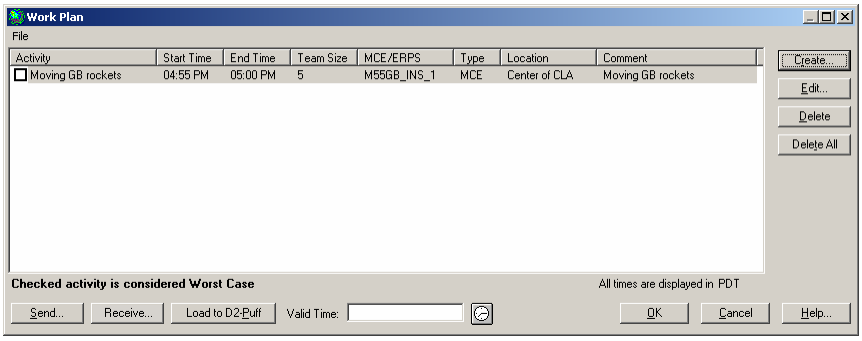


Step 2: Create a New Activity in the Work Plan

1. In the **Activity Name** field, enter **Moving GB Rockets**.
2. Click the button next to the **MCE/ERPS** field. The **Select Source Term** dialog opens.

   NOTE: The default activities are set in the Activity Manager. See your system administrator for more information.
3. Select the MCE **M55GB_INS_1**, then click **OK**. The **Complete Release Information** dialog opens.

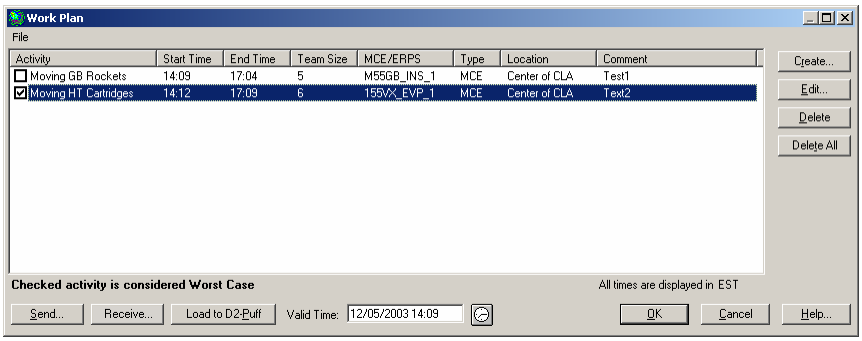
4. Enter a location or select a feature location from the **Feature Selection** dialog, then click **OK** to close the **Complete Release Information** dialog and return to the **Create New Activity** dialog.
5. In the **Number of Workers** field, enter **5**.
6. In the **Start Time** and **End Time** fields, enter the times that the activity will start and end.
7. In the C**omment** field, enter a description for the activity, then click **OK**. The **Work Plan** dialog opens with the new activity displayed



Step 3: Add another Activity in the Work Plan

1. In the **Create New Activity** dialog, enter **Moving VX Projectiles** in the **Activity Name** field.
2. Click the button next to the **MCE/ERPS** field. The **Select Source Term** dialog opens.
3. Select the MCE **155VX_EVP_1**. The **Complete Release Information** dialog opens.
4. Enter a location, then click **OK**.
5. Click **OK** again to close the **Complete Release Information** dialog.
6. In the **Number of Workers** field, enter **6**.
7. In the **Start Time** and **End Time** fields, enter the times that the activity will start and end.

8. Enter a location or select a feature location from the **Feature Selection** dialog, then click **OK**. The **Work Plan** dialog opens with the new activity displayed.



9. Click the check box next to an activity to designate it as the **Worst Case,** then click **OK**.

10. Click on the clock icon next to the **Valid Time** field and enter the time that the Work Plan is available for use, then click **OK**.

11. Select **File** ⇒ **Save to File** to save the Work Plan.

Step 4: Load a Work Plan into D2-Puff

An activity from the Work Plan can be loaded into D2-Puff and then run.

1. Click on the activity **Moving GB Rockets**.

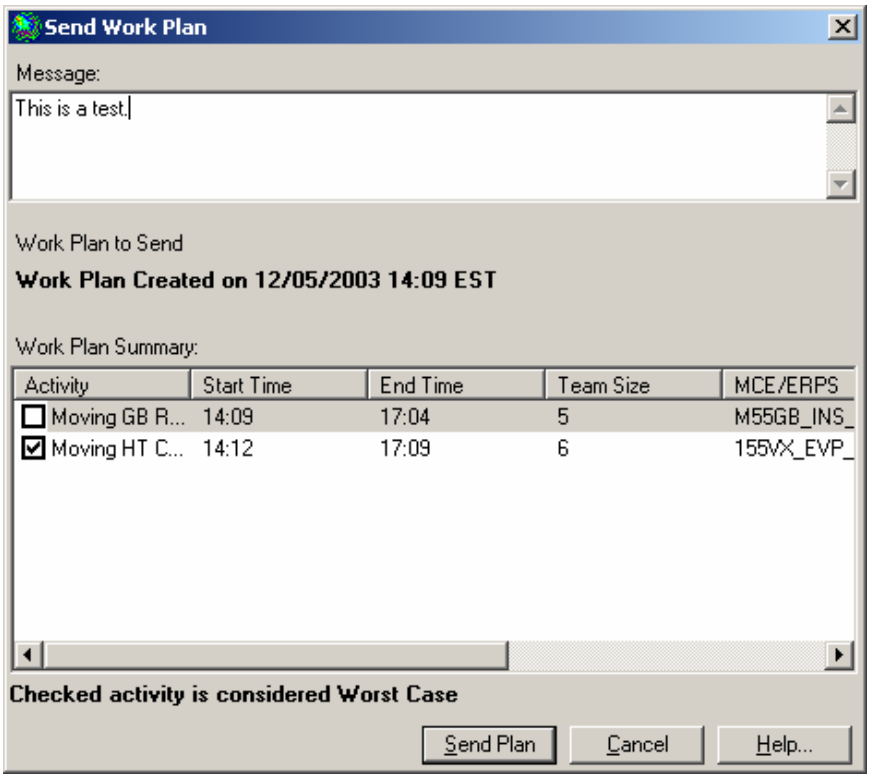
2. Click the **Load to D2-Puff** button. Any changes that you have made since the last time the Work Plan was saved, will automatically be saved and you will advance to the **D2-Puff** main screen.

3. Click the **Run** button to run the MCE or ERPS.

Step 5: Send a Work Plan

Work Plan files are sent in the same manner that scenario files are sent.

1. Click the **Send** button in the **Work Plan** dialog. The **Send Work Plan** dialog opens.



2. Enter any necessary messages in the **Message** box.
3. Click the **Send Plan** button to broadcast the plan. The Work Plan will be sent to both onpost and offpost users.

For More Information

IEM Contact Information

If you have any questions about D2-Puff, or need assistance that is not provided in this tutorial, please contact:

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D2-Puff Documentation Online

D2-Puff v4.4 documentation is now available online in .pdf format. You must have Adobe Acrobat Reader to open and print the .pdf files. If you do not have Adobe Acrobat Reader, you can install it from the D2-Puff Master Setup CD. Double-click on **rp505.enu** to begin the installation of Acrobat Reader.

1. Go to https://www.webpuff.com/doc/shared/D2Pmanuals.jsp.
2. Enter **CSEPP** for the login.
3. Enter **CSEPP** for the password.
4. Click on the .pdf of the file that you want to open.
5. Select **File** ⇒ **Print** to print the .pdf. The files are set up for duplex printing if you want to print double-sided.

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